Edited by

Vera Simone Bader

DesignBuild in Postcolonial Contexts: A Critical Interrogation

Sto Stiftung

Architecture

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The idea for this book was instigated by the exhibition “Experience in Action. DesignBuild in Architecture,” which was held in 2019 at the TUM Architecture Museum in Munich. The exhibition explored the topic from various perspectives together with the catalog and its different contributions. In it, the question of exporting teaching, concepts, and knowledge associated with DesignBuild was decisively addressed in the interview with Lorena Burbano and Sebastián Oviedo. Without their input, this project would not have been conceivable, which is why I would like to thank them for it and for their ongoing support. The Sto Foundation agreed to back the book project, allowing a deeper exploration of this topic, for which I am profoundly thankful. My special thanks go to the Foundation Board, especially Ralf Pasel and Till Stahlbusch, who, despite their own involvement in DesignBuild, also welcome critical voices, thus enabling a fundamental examination of the learning method. I am particularly grateful to all the authors who placed their trust in me and helped shape the book from its conception to final production. Without their tremendous dedication, the topic could not have been examined in such depth. My appreciation also goes to the numerous peer reviewers whose expertise provided invaluable support to both the authors and the project. I extend my gratitude to the TUM Architekturmuseum and its staff, where the project's conceptual direction was formed. Initial discussions with Tomà Berlanda, Hannah le Roux, Marlene Wagner, Alexander Furunes, and Clint Abrahams were instrumental in solidifying my ideas for the book. Special thanks are also due to Hans Skotte for the many insightful conversations. Additionally, I would like to thank Victoria von Gaudecker, Ursula Hartig, Pedro Damián Pacheco Vásquez, and Diego Alberto Rodríguez Lozano for their productive discussions, and finally, to all the contributors whose efforts made this book possible.

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Vera Simone Bader
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Introduction

The learning method DesignBuild is becoming increasingly popular in architecture schools worldwide. It enables students to think experimentally and implement their designs through personal involvement on a 1:1 scale. Theory is combined with practice, craftsmanship is placed alongside conceptual ideas, thus increasing the understanding of the versatility of construction. However, it is probably impossible to identify a single characteristic feature of DesignBuild. Vincent Canzenaro already pointed out that there are countless programs with extremely heterogeneous structures and very diverse intentions (Canizaro, 2012). Some studios even reject the term itself, as it originates from the construction industry and primarily stands for efficiency rather than social engagement. For this reason, many prefer to label their projects as "hands-on" or "1:1." Discrepancies also exist in terms of the orientation of projects. While some prefer to focus on the ex-perimental value, others consider the social component to be essential. Another controversial issue is whether DesignBuild ought to be understood primarily as a learning method affiliated to universities or, if independent activists may also define their projects realized with students as DesignBuild. The only aspect all initiatives have in common is the opportunity to provide students with valuable construction experience. Unlike Live Projects, which can involve various forms of social interaction, the goal of DesignBuild is always to build an object. This book considers different positions, as it is not about drawing strict boundaries, but rather about presenting diverse perspectives that consider DesignBuild in a postcolonial context.

"To hell with good intentions"

Although the conceptual orientation of DesignBuild is not necessarily geared towards a foreign assignment, students from Europe and the USA prefer to implement their projects on other continents. They are enthusiastic about encountering cultures "untouched by mainstream tourism," as it is often said, as well as the opportunity to escape the neoliberal market structures of architecture and instead have a direct

impact on social needs. They do not want to be powerless in the face of the world's economic and social inequalities but rather react in a self-empowered way, actively utilizing the newly acquired knowledge. The humanitarian effort, motivation, hard work, and generosity associated with the projects have long led to critical voices against the method being ignored or unheard, especially within the own discipline.

Yet tourism research has been warning for decades that the beneficiaries of socially engaged projects mainly come from the white middle class, who showcase their generosity (Bandyopadhyay, 2019; Vrasti, 2013). It is fitting that an increasing number of DesignBuild projects are awarded prizes that praise the social engagement of the students. This was most sharply addressed by Ivan Illich, who gave his provocative speech "To Hell with Good Intentions" to a group of volunteers from the USA in 1968. In the speech, he denounced their hypocrisy and ignorance in overlooking the forms of inequality that privilege them to impose their benevolence on others: "It is an incredibly unfair for you to impose yourselves on a village where you are so linguistically deaf and dumb that you don't even understand what you are doing, or what people think of you. And it is profoundly damaging to yourself when you define something that you want to do as 'good', a 'sacrifice,' and 'help'" (Illich, 1968: 7). Today, author Teju Cole calls this pattern of behavior a White Savior Industrial Complex, leading to projects with supposedly good intentions without shedding light on the major grievances and backgrounds of dominant cultures (Cole, 2012). To put it bluntly, one helps starving people and portrays oneself as a hero without recognizing one's own complicity in the plight. After all, the militarization of poor countries, short-sighted agricultural policies, the depletion of resources, and the support of corrupt governments primarily sustain the standard of living for Europeans and Americans: "The white savior supports brutal policies in the morning, founds charities in the afternoon, and receives awards in the evening." (Cole, 2012).

It must be countered that DesignBuild projects are not solely meant to do good. However, the criticism persists due to the lack of a reflective discourse on one's own actions. The great amount of documentation produced by students generally only details success stories. This rather one-sided perspective has various origins: Firstly, the high level of work motivation of students almost compulsively demands validation of their efforts. No one wants to admit that a project, on which they have worked intensively and unpaid for months, and for which both instructors and students have overcome numerous obstacles, has not achieved all its goals, or ultimately failed. In addition, one does not want to discredit the work of the many contributors or offend the financial supporters. Secondly, there is a concern not to further question the fragile status of the learning method within academic education.

Despite the great popularity of DesignBuild projects, universities seldomly offer permanent positions, provide little financial support, and have no fixed time frame for them. This results in a paradox: Since the learning method is not firmly anchored in the university curricula, the positive impact of the projects, which also brings public attention to the institutions, must be emphasized. Although these are very complex processes that must necessarily be questioned, this prevents critical reflection, which is normally demanded and expected by the same institution and which it usually represents. In other words, the DesignBuild learning method finds itself in a kind of vacuum, which significantly complicates a comprehensive scientific examination in this direction. There is a lack of deeper engagement with its effectiveness, ranging from learning processes to built results. Additionally, initiatives and methods from Latin America, Asia, and Africa, which have existed for decades, are largely unknown to the international as well as national community. The present publication can therefore be understood as a step towards closing this significant gap.

State of research

Researchers are showing increasing interest in the history of DesignBuild. Extensively, this has been documented in the USA—particularly concerning the school founded by Frank Lloyd Wright at Taliesin, the program initiated by Charles Moore at Yale, and the internationally prominent example: the Rural Studio at Auburn University (Moore, 1968; Rattenbury, 2000; Hayes, 2007; Marty, 2009; Freear, Barthel, Oppenheimer Dean, Hursley, 2014; Goodman, 2014). The history of the Ciudad Abierta in Chile and its architectural and artistic aspects also garners attention from a growing research community, who are increasingly concerned with the concepts and results of recent DesignBuild projects on the site (Pérez de Acre, 2003; Jolly Monge, 2011; Woods, 2021). It is noteworthy to mention the work of CINVA, an institution based in Bogotá, which dedicated itself to developing materials and construction methods for social housing from the 1950s to the 1980s, now attracting more attention as evidenced by recent literature (Le Roux 2021; Escorcia, 2023;). However, reporting on the global research status has proven extremely challenging, partly due to the divergence in architectural education approaches in each country, leading to varied developments in DesignBuild. As an example, a brief overview of the development processes in Germany will be provided here, where relevant projects have been examined, focusing primarily on the description of designs, materials used, construction techniques, and a closer analysis of evolving methodological aspects (Pawlicki, 2022). Little interest has been directed towards cross-references, which since the 1970s have included experimentation with various building materials or planning and building in developing countries. It is particularly regrettable that almost all the material related to such activities has been lost. Although Gernot Minke's research laboratory is cited as a forerunner of DesignBuild, nothing has

survived of the test buildings erected at the Kassel University of Applied Sciences. In this context, Ludwig Christians's work at the Technical University of Berlin investigating and teaching building practices in developing countries from a socio-economic perspective should also be noted. There is hardly any reference to him and his work. The lack of interest in such topics has resulted in the entire archive of the *Tropenbauinstitut* (Tropical Building Institute) founded by Georg Lippsmeier in Starnberg, dedicated to climate-sensitive construction in tropical countries, being handed over to the Canadian Center for Architecture (CCA). Although the archival situation is not as dramatic everywhere, Germany is certainly not an isolated case. However, the lack of documentation makes it increasingly difficult to research cultural-historical and academic backgrounds, developments, and connections.

In contrast, there is far more information available on the type of learning-based extensive theoretical debate: Experimental learning, collaborative or cooperative learning, situated learning, cognitive learning, and experiential learning have been discussed since the early 20th century by different scholars, with theories regarding the individual forms which were held to be generally valid. (Dewey, 1916; Kolb, Fry, 1974; Schön, 1984; Fals Borda, 1985; Lave, Wenger 1994; Peters, Armstrong, 2002; Antonini, Gaspari, Visconti, 2021) Nevertheless, the scientific work in this field plays a prominent role in the DesignBuild discourse, primarily because the various patterns of action have been repeatedly analyzed through pedagogical and philosophical approaches (Skotte, 2014; Hamdi, Skotte, 2021). Ultimately, in the process of interactive communication, not only are the hard facts such as sponsorship acquisition, planning and construction services, structural design, interior design, landscaping, and gardening taught, but also soft skills such as participatory methods and willingness to compromise. Ethical values, responsibility and self-confidence are also among the learning objectives, skills that are otherwise less promoted in architecture schools (Hartig, 2019).

What is largely missing, however, is a critical examination of central components of the method. There is hardly any in-depth analysis of what is actually being done, and notably lacking is an in-depth examination of specific examples where strengths and weaknesses have been identified. Critical reflection contributes to improving the quality and validity of one's own work and contributes to the further development of the research field. The exceptions that exist rather support the impression that a significant gap in academic work has emerged. For example, Patricio del Real reflects on the impact of the Rural Studio's university projects, which are provided to the community as free-of-charge gifts (del Real, 2009). He counters this ostensibly selfless gesture with the invisible costs, including the

full control of social ties and the undeniable fact that users must adapt themselves to the students' reinterpretations of tradition and vernacular construction techniques, whether they like it or not. Tomà Berlanda also gave sharp criticism when he first described the learning method in 2015 as "a new wave of colonial activities" (Berlandà, 2015). He pointed out that until then, far too little had been reflected upon about the approach, let alone considering the effect these projects have on local communities. His critique also extends to the lack of evaluation (Berlandà, 2019). In 2019, Martin Düchs demanded that the social practices be accompanied by theoretical approaches from philosophy, anthropology, and sociology to avoid running counter to one's own goals and aspirations (Düchs, 2019). Why this is particularly important for practice in foreign countries will be briefly addressed here, although the topic will be explored in more detail in the following contributions.

DesignBuild in a postcolonial context

It is important to note beforehand that a critical examination proves challenging primarily because a single analytical research approach cannot be applied either *a priori* or *a posteriori* to all projects. DesignBuild is a process bound to the intentions of the individual studios, as well as to the location, time, and thus to the culture, society, and politics of each respective country. However, a quick glance at postcolonial theories demonstrates the significance and necessity of engaging with them. Notably, psychiatrist Frantz Fanon's discourse on cultural imperialism in the 1950s is relevant. From the perspective of the oppressed, he addressed in his publication *The Wretched of the Earth* the devaluation, distortion, and disfigurement of cultures by the Western colonial powers in Africa, shedding light on their violent efforts to define what art and culture should be (Fanon, 2021: 175–209). Against this theoretical background, architecture projects initiated in a foreign country, where students alone decide on aesthetic design issues, appear in a different light: namely as a colonial gesture.

Anthropologist Arturo Escobar reflected on disempowerment, albeit in the context of post-decolonization, processes-driven development aid from the USA and Europe for communities in the so-called "Third World," which he describes as a discourse led by the West and as a structure of domination (Escobar, 1995). He criticizes the fact that the propagated poverty and the institutions, programs, and networks established to combat it constituted underdevelopment and stigmatized entire populations. Although DesignBuild projects, compared to politically and economically supported development aid, have a minimal scope and thus only have a manageable impact on the local community, they align with the mechanisms analyzed by Escobar, particularly when the project initiatives are developed within the

framework of university teaching without involving the local population. Moreover, racist thinking, though not necessarily conscious, can permeate all levels of action and can often be structurally and institutionally entrenched. In this context, the sociologist Boaventura de Sousa Santos is noteworthy for emphasizing knowledge production from the "Global South", thereby exposing the ongoing Western hegemonic epistemology (de Sousa Santos, 2014). Do DesignBuild projects genuinely aim to acquire knowledge from communities in foreign countries? Certainly, students seek to learn about traditional materials like mud and bamboo as well as conventional building techniques, but is this knowledge sustainable concerning their own design practice, or does it primarily satisfy their own exoticist enthusiasm? Answers to such questions should be sought.

That a more in-depth engagement in architectural education is indeed possible is demonstrated by the 113 projects summarized in the publication *Radical Pedagogies* (Colomina, Galán, Kotsioris, Meister, 2022). The compendium on the history of architectural education features worldwide examples from the 1940s to the 1980s, aiming either to dismantle societal and political structures—especially concerning race, class, and gender—or hierarchical and capitalist notions. For instance, developments at the Mexican Universidad Nacional Autónoma de Mexico Autogobierno exemplify this, where students in the 1970s, in a decolonial and depoliticizing act, strove for an education that is oriented towards the concrete living conditions of the population. DesignBuild can be considered part of this radical pedagogical approach, especially when the projects exhibit characteristics that challenge the traditional educational approach and the normative view of European educational institutions on architecture as a program intention, and especially when they support the emancipatory efforts of the local community in close exchange with each other—topics that will also be addressed in the forthcoming contributions.

Book program

In the first part of the book, the focus is primarily on uncovering the difficulties that arise when student projects are conducted abroad. Rachel Lee and Monika Motylińska delve into the *Tropenbauinstitut* founded in 1963 by Georg Lippsmeier, illustrating how architects from the "Global North" generated technical content, disseminated it internationally, and thus determined the discourse for a long time. In his contribution about a project implemented in Uganda by German and Ugandan universites, Mark Olweny demonstrates how influential such technical-scientific approaches, which ignore any cultural and social aspects, can be. He discusses the importance of collaborative approaches, but also addresses the serious consequences that arise when collaborations are not carefully thought through from beginning to end. Sebastian Oviedo and Lorena Burbano in particular trace cultural inequalities and unilateral exercises of power, detailing

problematic approaches in communication and design that they have observed in their own practice. At the same time, they highlight the opportunities offered by the DesignBuild method, which can be used to counter systemic asymmetries.

The second chapter addresses the various ways of acquiring knowledge. Javier Correa, for instance, shows through the example of the Open City in Valparaiso (Chile) how the research-oriented character of architectural education can lead to the consideration of other forms of artistic expression such as art and poetry. This surprising combination enables a completely new approach to architecture, questioning conventional, Western-influenced notions of modernity, such as the role of functionality. Nkosilenhle Mavuso demonstrates the importance of such experiences that defy normative rules in the postcolonial context, reporting on the practice of South African students who, in a decolonial act, search for "black spaces" to counter the one-sided perspective of Western architectural education. While these two authors focus on the experimental part of the learning method, which leads to new insights mainly in spatial experience and perception, Amritha Ballal concentrates on the significance of the constructive practice made possible through DesignBuild projects. She explains, through several projects, why it can be beneficial for students from India to engage with the real world of construction. Finally, the connection to the construction site not only provides them with a more direct insight into their own building tradition, but also allows for a deeper understanding of the prevailing culture of supervised self-building.

In the final chapter of this book, the authors dedicate themselves to the participatory strategies of DesignBuild, arguably the most complex aspect of the learning method. Catalina Mejia demonstrates through CINVA how academic education projects already used participatory methods back in the 1950s. Using various initiatives, she explains the difficulties encountered, especially when a purely academic-scientific approach was chosen. The results were decidedly different when the actors considered popular and situated knowledge. Gabriel Arboleda brings the debate about interactive learning into the present day and raises the fundamental question in his contribution of whether architectural design is at all suitable as a catalyst for social improvement. Using examples of a poor neighborhood, also in Colombia, he vividly describes how well-intentioned concepts profoundly affect the local population and what possibilities a bottom-up approach offers, which can also be achieved in DesignBuild projects when a close exchange between students and users is assumed from the outset. Anna Goodman uses the example of the Rural Studio to address the fact that, despite all the best intentions, there are also deep divides that arise, not least due to neoliberal economic structures supporting such initiatives. She reveals how political and economic conditions affect a location-bound regional architecture that emerged in a DesignBuild process.

The many facets of DesignBuild

This publication takes up different positions of DesignBuild, showcasing the diverse facets of the learning method that can be critically examined. In addition to the students' viewpoints, the contributions also address those of the community, educators, and supporters, specifying the problems and challenges faced by all those involved. Following this diversity-based approach, the authors' texts are methodologically heterogeneous. While some detail their own observations and experiences, revealing how asymmetrical power structures manifest within the learning method, others have a scientific perspective on the development of DesignBuild and the resulting opportunities in their country. Through methodological plurality, the individual program points of the learning method are illuminated, consisting of building experiences, but also of interdisciplinary research, experimental exploration, interactive communication, collaborative design, and the formation of networks. In this way, a level of reflection is created that approaches the difficult-to-measure processes through self-knowledge as well as though theoretical foundations.

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Part 1

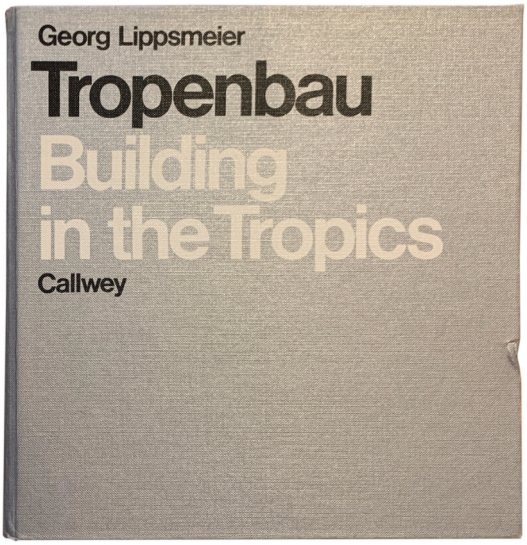
Research and Organization

Essential Reading?

The *Institut für Tropenbau's* Publications as Primers for the DesignBuild Movement

The *Institut für Tropenbau* (Institute for Building in the Tropics, IFT), founded by the German architect Georg Lippsmeier in 1969, impacted architectural production in diverse geographies and cultural contexts until the late 20th century. As the research arm of the international architectural practice Lippsmeier+Partner (L+P), which focused on building in the "Global South," IFT contributed to the growing discourse on so-called "tropical architecture," (King and Chang, 2016; le Roux, 2003) and later on "appropriate technologies." The interest was manifested most strongly through IFT's publications. Beginning with *Tropenbau = Building in the Tropics* (1969), IFT published a series of books, reports, brochures, and newsletters that were circulated within "development" oriented architectural circles. Two editions of *Tropenbau* (1969 and 1980; Figure 1a-b) were stocked in libraries around the world.[1] IFT's research and publication activities were inseparably intertwined with Lippsmeier's private architectural practice.

With a practice-oriented, handbook-like character, IFT's bilingual publications (German and English) aimed to support building design and construction processes on the ground. Their technical content, which addressed building materials and methods, infrastructure and technologies, and specific building typologies, drew on a combination of in-house and external research. In the main, this was conducted by architectural practitioners from the "Global North" who were working on building projects in the "Global South." IFT's publications can be categorized as belonging to the expanded heritage of building manuals spanning those written and circulated by Christian missionaries during the 19th century, to publications by sanitary engineers and physicians in the late 19th and early 20th century, to those produced by colonial administrations and their attendant bodies of operation such as public works departments in the 20th century.



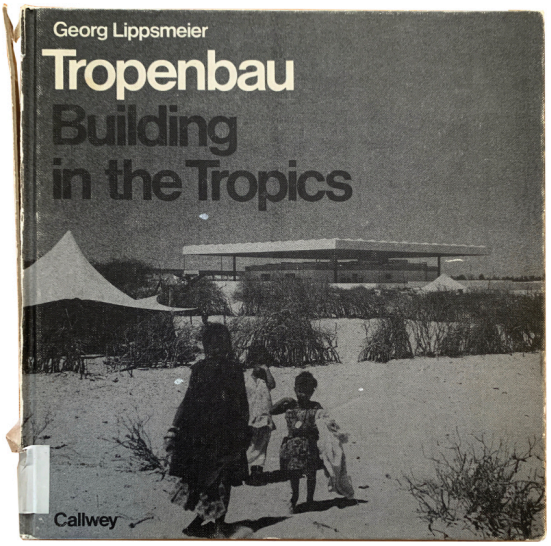


Figure 1a-b: The covers of the 1969 and 1980 editions of *Tropenbau = Building in the Tropics*.

In the British Indian Empire, for example, the Public Works Department of the Government of India was responsible for designing and constructing much of the infrastructure and utilitarian architecture that built the framework on which the expansion and consolidation of empire was based (Scriver, 2007; Jackson and Holland, 2014). The civil servants and engineers who worked on these projects used building manuals as the basis for their designs. The manuals were circulated throughout the British Empire as building guides that could be adapted to local conditions. These were also in direct conversation with more contemporary practical guides for builders in tropical regions, such as Jane Drew and Maxwell Fry's *Village Housing in the Tropic*s (1947), Alfred Alcock and Helga Richard's *How to Plan Your Village* (1953), and Otto Koenigsberger et al's *Manual of Tropical Housing and Building* (1974) to name just the few most widely known titles from the Anglophone context.

In this chapter, we analyze IFT's publications in relation to their conception, production, and reception, discussing their significance within architectural practice and education. This analysis is embedded within the context of the discourse and practice of tropical architecture that emerged and was sanctioned by "experts" in the "North" as a particular approach to building in the mid-20th century. Through their commitment to spreading technical building know-how, we will position IFT's body of work as primers for the DesignBuild movement that emerged in the

1970s in Germany. We situate the DesignBuild approach within the expanding genealogy of tropical architecture, in part supported and perhaps even enabled by the technical publications produced by IFT. By cross-examining the content of IFT's publications and the scope of the library in Starnberg, we demonstrate how parallels in the project-based approach can be traced between L+P/IFT and the precursors of the (German) DesignBuild movement (Bader, 2023). Our aim is to uncover broader contexts and networks of these phenomena that occurred almost simultaneously, without establishing a causal link.[2]

Tropical architecture

With roots in colonial building practices, tropical architecture was institutionalized as a discipline and field of practice in Europe and North America in the mid-20th century. Combining a techno-scientific approach to building design and construction, tropical architecture focused on optimizing architectural design, particularly in terms of building performance, within the climatic zones that have been categorized as "tropical." The theorization of building practices in tropical regions that prioritize aspects including improving the circulation of air, perfecting sun-shading, and minimizing thermal gain can be traced to the work of colonial sanitation engineers and physicians in the 19th century (Anglophone: Jeffreys, 1858; Luki and Blackham, 1911; Platt, 1923; German: Pauli, 1904). In many cases, these technicians were building on foundations laid by missionaries who had accrued considerable knowledge in colonial building practices which they communicated to wider audiences through exhibitions and publications (Osayimwese, 2017: 168; Christian Missionary Civilization, 1842).

The development of tropical architecture is particularly evident in the typology of dwellings for various ranks of the colonizers, including villas and military barracks, but extends to other building forms, including public buildings such as schools and hospitals, as a means to protect the bodies of those involved in colonial conquests from what they perceived as physically and mentally threatening local environments. The quantification and codification of building practices through the collection and collation of data was key in developing standardized building types that ascribed to certain design principles. Through publications such as building manuals, these designs could be reproduced in different colonized parts of the world. In some contexts, colonial officers appropriated local building types and forms, adapting them to serve different cultural needs. As analyzed by Anthony King, the northeast Indian bungalow is an example of this (King, 1995). The manuals did not replace individual agency but rather provided a hands-on compilation of technical solutions and an ideological framework for developing buildings. Simultaneously, as links were made between ill health and the built environment in Europe through diseases such as tuberculosis, the emerging architectural profession began prioritizing health at the intersection of spatial design and climate.

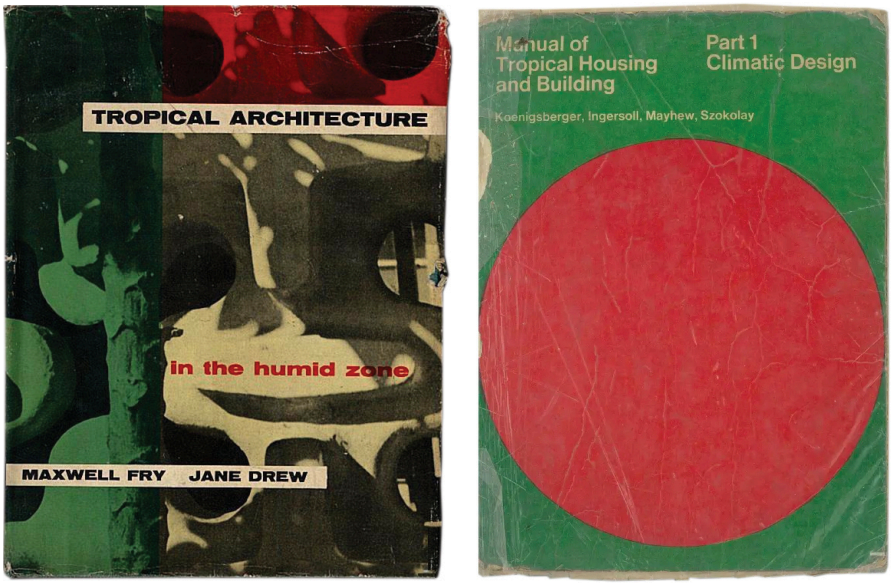


Figure 2a-b: Covers of Maxwell Fry and Jane Drew's *Tropical Architecture in the Humid Zone* and Otto Koenigsberger et al's *Manual of Tropical Housing and Building*.

This was taken up in earnest by the international modernist movement in the early 20th century with light, air, and openness becoming design focal points aimed to combat the desperate living conditions in rapidly growing European cities. Through case-study approaches, architects involved in international networks such as CIAM compared housing design solutions that responded to local climatic conditions, communicating their findings in exhibitions and publications (International Congress for Modern Architecture, 1930 and 1931). This scientific approach to architectural design contributed to the development of a sub-field of architecture that understood research as a key informer of appropriate design.

As well as having experiences in European cities, some of these architects also practiced internationally, and indeed, colonially. These included the British partnership of Maxwell Fry and Jane Drew, and Michel Écochard from France, among many others (Verdeil, 2012). Otto Koenigsberger accrued his international experience in a different context. Exiled from Germany due to his Jewish background, he was employed as Chief Architect and Town Planner of Princely Mysore State in south India before becoming the Director of Housing in the government that was formed after India won its independence.

His 12 years working in connection with India's built environment were surely affected by colonialism but were not undertaken in its service (Lee, 2019 and 2015). Through a combination of practical experience, observation, and an increased focus on dedicated study (through building research stations, for example), these architects and planners became key figures in the development of the tropical architecture discourse and its institutionalization in (ex)colonial metropoles during the immediate post-Second World War period. The focus on climate-responsive building techniques that was typical of the tropical architecture discipline subjugated cultural and socio-spatial aspects of architecture, while "comfort" was employed as an all but neutral category to justify continued interventions in foreign geographies (le Roux, 2020; Chang, 2016).

The ongoing engagement of colonial figures and institutions in post-colonial contexts and the adoption of the tropical architecture approach by architects of the Eastern, Western, and non-aligned blocks, as well as transnational organizations such as the UN, for building projects in the "Global South" raises obvious neo-colonial associations. Fry and Drew, for example, continued to receive commissions abroad. During the 1950s and 1960s, they worked in Chandigarh, India, where their colonially gained architectural expertise was applied in a post-colonial context. In addition to UNESCO, in Africa, the World Bank embarked on extensive school-building programs that combined multiple agencies from diverse, mostly Western contexts, in transnational construction projects. As well as providing educational infrastructure, these projects aimed to perpetuate the influence of the main funding agencies in the de-colonizing world (De Raedt, 2022). The Department of Tropical Studies, founded in 1954 at the Architectural Association in London, played a crucial role in this process.

Initially directed by Maxwell Fry, Otto Koenigsberger, who had co-designed the curriculum, took over the leadership of the department's in 1957, maintaining that role through the department's various incarnations until he retired in 1976. Employing teachers with experience in tropical, and mostly colonized environments, the department sought to educate international cohorts of young architects—many of them from decolonizing and tropical environments—preparing them specifically for work in tropical areas. Several of the instructors at the Department of Tropical Studies also conducted research and published their findings in manual-format books (Levin, 2015).

Jane Drew and Maxwell Fry's books *Village Housing in the Tropics* (1947) and *Tropical Architecture in the Humid Zone* (1956; Figure 2a) both provide guidelines for designing settlements as well as distinct building types (from residential architecture, to commercial and educational as well as healthcare) in tropical climates.

Drawing from their own work in West Africa, India, and the West Indies, as well as projects by other mainly "northern" architects working in tropical zones, the publications explain how to approach architectural design by highlighting factors such as sun-shading and through-breeze. Accompanied by plans and sections, which illustrate the penetration of sunlight into structures or visualize the flow of air through spaces, as well as indications of how to apply more technical tools such as sun-path diagrams or heliodons, the books provide principles and guidelines for architects intending to construct buildings in tropical regions. By embedding these principles in examples of executed building projects by architects in tropical zones, Drew and Fry's books began to reflect a community of practice. As well as Drew and Fry, through the mid-20th century other architects contributed to building this growing field of knowledge through manual-style publications.

These include AES Alcock's *How to Plan your Village* (1953) and Otto Koenigsberger, TG Ingersoll, Alan Mayhew, and SV Szokolay's *Manual of Tropical Housing and Building* (1974; Figure 2b).[3] Victor Olgyay's *Design for Climate* (1963) also presents a contribution to the climate-driven design discourse, in this case from the USA. In her work on the manuals produced by Yona Friedman and Eva Schaur for the UN-funded Communication Center of Scientific Knowledge for Self-Reliance, Frederike Lausch points out the inherent imbalance in expertise assumed through the production of that type of publication, whereby foreign expertise outweighs local knowledge (Lausch, 2023). The particular role of Israeli expertise has recently also been investigated (Levin, 2022). It is important to acknowledge that in the mid-20th century scholars in the "Global South" were also contributing to the production of knowledge around architecture in tropical areas, yet their publications remain less well-known (Rivera de Figueroa, 1980).[4]

Theoria cum praxi? Genealogy of *Tropenbau = Building in the Tropics* (1969)

The book by Georg Lippsmeier and his collaboration partners, *Tropenbau = Building in the Tropics* published in 1969, also falls into the broad category of tropical architecture, however, contrary to the works mentioned above, it emerged within a specific, non-anglophone context. Its history is closely intertwined with Lippsmeier + Partner (L+P)'s architectural practice and its attendant research laboratory, the *Institut für Tropenbau* (Institute for Building in the Tropics) (IFT) (Folkers, 2022). The interconnectedness of long-term practice and research in tropical regions was translated into the production of shared knowledge through publications such as *Tropenbau.* This created a platform that enabled a diverse range of actors to access architectural design and building projects in decolonizing countries, including those involved in the emerging DesignBuild movement. In the early 1960s Lippsmeier identified a knowledge gap in the German architectural realm in relation to building in tropical regions. Not a single architecture school in West Germany

offered a course in tropical building (Bader, 2023). Aware of the developments in the UK in particular, Lippsmeier was keen to support West German architects in successfully securing and executing commissions around the world. So, with the aim of collating and systemizing existing knowledge for the benefit of future designers engaging with architecture in tropical regions, Lippsmeier developed *Tropenbau*. Its publication in 1969 coincided with the emergence of courses on tropical architecture in German universities, and by the time of the publication of the second edition in 1980, at least seven architecture schools in West Germany offered education on architecture in tropical regions with their programs integrating excursions and practical experience to countries including Zambia, Malaysia, and Tanzania (Bader, 2023). IFT also closely followed and collected grey literature that stemmed from the research-design activities across West Germany and was a cornerstone in the collection, communication, and networking of knowledge (IFT, 1970; Schwencke, 1975; *Städtebauliches Institut im Fachbereich Architektur und Stadtplanung der Universität Stuttgart,* 1979).

L+P was founded in 1950 in Düsseldorf by Georg Lippsmeier, a year after his graduation from the Technical University in Braunschweig and before he completed his PhD in 1953. The venture was successful, and in 1960, L+P expanded, opening a branch in Munich before moving to Starnberg, a rather idyllic getaway destination for the wealthy citizens of Munich, in 1965. Although L+P maintained the office in Düsseldorf, perhaps not to forgo the beneficial proximity to one of the centers of German industry, it was in Starnberg that practice and research in tropical architecture most strongly intersected.

Remarkably for a small practice without an extensive professional network, already in 1953 L+P was awarded with their first international commission, namely the design of a (German) pavilion for the Rand Easter Show, the largest trade fair in Johannesburg, South Africa. From then on, trade fair architecture became one of L+P's mainstays—and it is no exaggeration to say the architects used it as groundwork for their successful business model (Forthcoming: Motylińska and Lee, 2024). It provided the office with a reliable and substantial income.

Although there is no proof in the sources to indicate that it was indeed the German pavilion in 1953, and we can thus we can only speculate,[5] L+P designed and constructed trade fair projects which represented the German industry (e.g. New Delhi 1961, Khartoum 1961, Accra 1967) either for whole venues or as single pavilions. These were not only perceived as "rewarding" ("dankbare Projekte") for financial reasons. As short-term involvements that resulted in temporary buildings, these projects reduced the necessity for maintenance and the liability of the architect was also limited.

In addition, involvement in trade fairs proved to be beneficial to L+P in terms of establishing a substantial transnational network, enabling the striving architects not only to build ties to representatives of German industry and international politics but also, and perhaps more importantly, to have extensive contact to potential clients and commissioners from Asia, Africa, and Latin America.

Nevertheless, the first major long-term commission for L+P outside Germany, the regional hospital in Diourbel, Senegal (completed in 1966 and still functioning under the original name Hôpital Heinrich Lübke) was a seemingly straightforward development aid project financed by the West German state and skilled labor coming from Germany to the newly independent West African nation. However, this project cannot be reduced to its perception as a purely development aid intervention, since simultaneously, it was also part of the Senegalese nation-building project that focused on the domains of healthcare and education. We can only speculate how it was possible for L+P to be granted such a large commission, but the fact that Lippsmeier was described by his colleagues as a "great networker" surely helped.

Figure 3a: Heinrich Lübke Regional Hospital in Diourbel, Senegal, architect: Lippsmeier + Partner. State: May 2022.

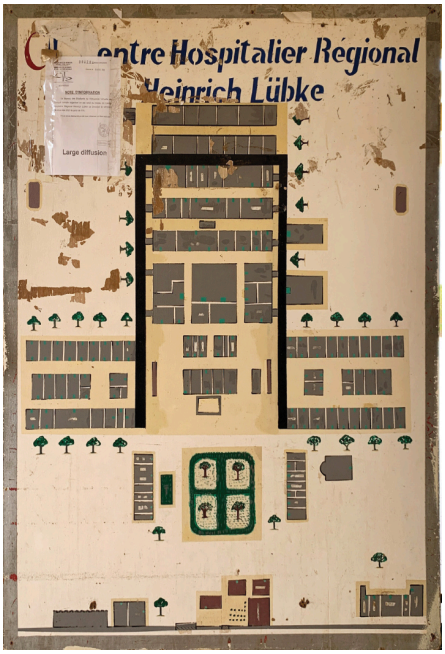


Figure 3b-c: Heinrich Lübke Regional Hospital in Diourbel, Senegal, architect: Lippsmeier + Partner. State: May 2022.

One of the reasons for the architect to get involved must have been his growing interest in healthcare architecture and climatic adaptability of buildings that intensified throughout the 1960s. Diourbel was an ideal "testing ground" for both—a project supported by local politicians for a hospital built from scratch in a region known for extremely high temperatures and arid, desert-like conditions. With its efficiently designed pavilion structure, it offered smooth circulation of staff, patients, and family members undertaking care duties.

The adaptability of the project that could be—and in fact has been—expanded over the following decades of intense use became one of the trademark design principles of L+P (Figure 3a-c). As it seems, the hospital in Diourbel was not widely publicized or commented upon—there is only one article by Lippsmeier published in *Baumeister* (Lippsmeier, 1966). And yet, it became a major milestone, as one of the two largest early international projects of L+P (the second one was a hospital in Da Nang, Vietnam). Besides, the hands-on approach to experimenting with building under tropical conditions, accompanied by an intense study of the international discourse on the topic, meant that Lippsmeier and his colleagues started to generate a large—and in the German context—unique body of expertise.

L+P's building work informed its research and vice versa, in what could be termed an action research approach to practice. Capitalizing on it and thanks to the income generated through trade fair activities, Lippsmeier founded the research arm of his architectural practice, *Institut für Tropenbau* in the Starnberg office in 1969.

Although globally connected and a key node in the tropical architecture networks, IFT was not affiliated or bound by international organizations such as UN Habitat or UNESCO. This is the difference in comparison to specialized research units such as s.m.u.h. in Paris or architectural offices that emerged in the late colonial period within imperial contexts. IFT functioned independently, traversing borders and boundaries and acquiring contracts and research funding from a variety of sources, including the West German state or *Deutsche Forschungs Gemeinschaft* (DFG) (German Research Foundation). Committed to publishing in both German and English, IFT contributed substantially to the discourse surrounding the growing international tropical architecture field, serving a global audience while targeting the German-speaking architecture, construction, and research markets. Through the collection, collation, and dissemination of material referring to tropical architecture, IFT became a one-of-a-kind institution, both a knowledge hub, and a center of expertise.

By the 1970s, L+P was running regional offices in Togo, Mauritania, Tanzania, Laos, South Vietnam, and Brazil. A permanent office was established in Dar es Salaam, Tanzania, from which a wide range of projects—including hospitals, universities, printing presses, radio stations—were constructed across Africa. While in the 1960s, Lippsmeier's office had strong links with South-East Asia (mostly Vietnam), Africa gradually became the continent in which L+P and IFT were most active, with a significant number of buildings being built, particularly in Tanzania. These regional offices were indispensable for acquiring further commissions, but they were also crucial for the functioning of IFT since they gave the research institute direct access to publications and experts from the "South." This is visible in the structure of the extensive library collection of the IFT (which was donated to the Canadian Center for Architecture, CCA in 2017) that includes a huge collection of literature on building materials, local contrac-tors, or infrastructural planning in Africa (and to a lesser extent, also Asia and Latin America), among other topics. However, even if the decolonizing countries seemed to be the main addressees or targets of L+P as potential clients and commissioners, the interest and specialization in building in the tropics was understood in more general terms. IFT defined the "tropics" as the zone between the tropics of Cancer and Capricorn in the 1969 edition and more specifically in the 1980 edition as the undulating band around the equator between the 20° isotherms of the northern and southern hemispheres in which the average annual temperature does not drop below 20°C (IFT, 1970)—following the sup-

posedly objective geographical category (Motylińska, 2020). The maps in both editions consistently show the 20° isotherms.

Reading and building *Tropenbau*

Both the practical experiences gained through commissions, especially in Senegal and Vietnam, as well as nascent research activities at IFT resulted in the institute's first major publication, namely *Tropenbau = Building in the Tropic*s (1969). This book is one of several mid-20th century publications that highlights approaches to building in regions with tropical climates, and must be interpreted in relation to those, and embedded within the longer history of tropical architecture as outlined above. Working with similar architectural publication tropes, *Tropenbau* made a distinct contribution to the field. It was the first of many application-oriented research publications that IFT produced in the form of books, reports, articles, and newsletters, establishing them as a committed player in the tropical architecture realm. Reissued in 1980, *Tropenbau* has become widely stocked in libraries and collections concerned with building in tropical climates around the world.

Despite the singular name on the cover, the authorship of the book is, as we have established through oral history collection,[6] in fact collective. Georg Lippsmeier was the leading persona and *spiritus movens* behind the publication and it would not have materialized without his continuous engagement in the topic. However, the publication emerged out of a close collaboration with his colleagues, both credited and not. Their contributions were crucial for the development of the geometrical model of adaptability to changing solar conditions and for integrating observations from the field. As well as technical diagrams, the visual layer of the book included numerous photographs, roughly half of them documenting L+P's own projects and mostly taken by Sigrid Neubauer, a photographer from Munich. A specialist in architectural photography, she worked for L+P and accompanied the team on several missions, delivering high quality images of the architecture projects. Unlike the vast majority of previous publications on tropical architecture, *Tropenbau* was bilingual (cf. Danz 1967).[7] Formatted with two text columns, each page presents a German text on the left and its English translation on the right.

While offering German as the original language, thereby centering German knowledge production and appealing particularly to a German-speaking audience, the translation ensured access to a far wider international readership, creating a foothold in the wider tropical architecture discourse. Its format and design also set it apart from other publications. Its square format, clear layout, and sans-serif font speak to rationality and clarity, while its silver cover indicates technical expertise and a sensibility for materials. The bright orange endsheets contrast with the minimalism and monochrome design of the rest of the book, making a bold, confident impression.[8] To a far greater degree than the other publications,

Tropenbau is a design object, employing an aesthetic language that aims to appeal to design professionals. It is a high-quality publication that demands to be taken seriously. While the text does not offer advice or advance theories related to building aesthetics or architectural forms, the high-quality photographs that enliven its pages further illustrate Lippsmeier's aesthetic standards. This is perhaps particularly the case in relation to the presentation of L+P's own building projects, which appear as high-tech, finely hewn objects that cast shade in attractive geometric patterns. Such images conflict somewhat with the narrative conveyed through the text that promotes the production of high quality buildings with limited means.

In terms of content, the book follows a similar structure to the others, beginning with chapters on tropical regions and climate before moving into analyses that speak directly to architectural practice and design. However, rather than focusing on particular building typologies like Fry and Drew or the specificities of thermal design, with particular attention paid to lighting and noise as seen in Koenigsberger et al, *Tropenbau* highlights aspects of construction. It includes chapters on building materials, infrastructure, and construction of the external envelope, for example. While the book draws on the same visual language of architectural photography, analytical drawings and diagrams that, for instance show how to analyze window openings in terms of solar penetration or indicate the movement of air around buildings, and technical architectural drawings—particularly sections—that communicate how spaces function in terms of thermal performance, it contains many more detailed tables of information that reveal how particular materials perform in certain conditions (Bouet, 2021).[9]

Through this compendium-like approach, *Tropenbau* seems to go further in assisting in the overall design, detailed design, and construction of buildings, better enabling those involved in the construction process to make decisions on the ground. However, the application of the technocratic vocabulary and decorum follows the long tradition of the discourse on tropical architecture with its problematic relation to architecture designed in other climates—as recently analyzed by Jiat-Hwee Chang and Daniel Ryan (Chang and Ryan, 2020).[10] Yet—to complicate the interpretation of Lippsmeier's legacy—this positioning in line with technocratic thinking does not mean a complete lack of sensitivity to local contexts. While discussing practical aspects of designing social infrastructure in their other, more detailed publications, especially with regard to the hospital design projects, Lippsmeier and his collaborators acknowledged the crucial task of accommodating local customs by the designers, for instance, by adding open cooking spaces where family members could prepare meals for their sick relatives (Demeter, 1987). However, this sensitivity is obscured in *Tropenbau*.

A similar collation of information marks the end of the book, with several pages dedicated to listing institutions and organizations related to tropical building research around the world. It includes a forest research institute in Dehra Dun, a materials and soils mechanics laboratory in Kuala Lumpur, and the East African Industrial Research Board in Nairobi, as well as UN organizations and the Department of Tropical Studies in London. Collecting and sharing this type of knowledge is an indication of the IFT's intention of becoming a knowledge hub committed to communicating and multiplying the practice of building in tropical regions.

Apart from that, *Tropenbau* can be interpreted as publicity for L+P architectural practice. As mentioned above, many projects by Lippsmeier and his colleagues were included in both editions to demonstrate the application of design principles—and to convey a strong visual message positioning L+P/IFT as experts in the field of building in the tropics. Among the prominently featured examples was the tertiary hospital in Mwanza, Tanzania (completed in 1972) (Lee, Mkony, Motylinska, 2021). Similarly to the regional hospital in Diourbel, it was one of the crucial investments in Tanzania's provincial social infrastructure and part of the nation-building project. For L+P, it was one of the largest hospitals they ever built, becoming a major reference project. For the IFT, it was simultaneously also a site of experimentation, as will be explained in the following section.

The book's bibliography too, is extensive and was likely intended as an additional resource to architects considering working in the tropics. It is predominantly bilingual, German and English, however, especially in the second, revised and updated edition from 1980, publications in French and Spanish are also featured. Lippsmeier and his co-authors were familiar with the knowledge production on climatic design in the US and Australia, which is also confirmed by findings in the Lippsmeier Collection at the CCA, including grey literature from Queensland University or the Division of Building Research of the Commonwealth Scientific and Industrial Research Organization. As for publications in German, those from the GDR are also listed, thus demonstrating that IFT kept track of the discourse in the Eastern Bloc.

This does not come as a surprise, particularly if we take into account that some East and West German architects either maintained direct professional contact or at least attended the same international conferences. The exchange only intensified during the 1970s, following the abolition of the Hallstein doctrine and the beginning of diplomatic relations between the countries. Strikingly, no titles published before 1945 are included, though a closer look proves that IFT knew and was in possession of *Tropenhygiene* by Ernst Rodenwaldt,[11] which was, in fact, the fourth edition of a publication by a physician leading a research unit in

Heidelberg conducting research on tropical medicine throughout the Nazi era. Rodenwaldt based his chapter on architecture under tropical conditions on publications by Friedrich Vick, a German architect active in the 1930s and 1940s who gathered substantial knowledge on issues of natural and mechanical ventilation in Southeast Asia and during the Second World War was involved as an expert in the malaria prevention campaign for the *Wehrmacht*. This means that, although no direct references ever appear in the text, the authors were familiar with the German-speaking discourse on building in the tropics from the interwar period and it might have informed their concept of applying different forms of ventilation (which were discussed at length in both editions of *Tropenbau*).

In terms of the potential readership of the book, Lippsmeier writes that while increasing numbers of architects from "tropical countries and from industrial countries of the temperate latitudes" are employed in tropical regions, there is a lack of education in tropical building. He sees the book as "a compendium for planners, architects, engineers, and also clients who can be assumed to have a basic knowledge of building." (1969, foreword) The book is devised as a tool to deepen practitioners' knowledge in building in tropical regions. However, in the foreword of the second edition of *Tropenbau,* Lippsmeier notes that the book has been unintentionally used as a textbook.

Unexpectedly, *Tropenbau* had become a book employed as essential reading in architecture schools in departments that were also increasingly focused on designing architecture in tropical zones. Furthermore, the 1980 edition was edited with a view to further serving that audience. Beyond the AA's Department of Tropical Studies mentioned above, in Darmstadt a chair for tropical building was founded in 1969. By 1980, the TU Berlin, Stuttgart University, and Cologne's University of Applied Sciences, among other universities in the Federal Republic of Germany, were also all engaging with architecture and planning challenges in tropical regions (Misselwitz, 2017). Beyond design studio work in Germany, these departments also took students on excursions or field trips to the tropical regions where their design projects were located, sometimes also including them in executing projects designed by their instructors.[12] This form of engagement can be seen as a precursor to the DesignBuild studios that began emerging in the 1970s. Even if Georg Lippsmeier himself or his colleagues from L+P and IFT were not directly involved in teaching, exchanges with university-based research institutes outside Europe such as the Research Committee on Solar Energy and Tropical Housing affiliated at University of Queensland and the Department for Architecture at the University of Puerto Rico demonstrate that the academic context was not off the radar for the architects from Starnberg.

I.F.T.

INFORMATION 1

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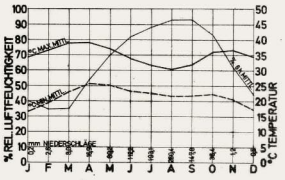
FRAUENGEWERBESCHULE

Ouagadougou, Obervolta, Westafrika
12° Nord, 2° West

Auftraggeber:
Republik Obervolta, Ministerium für Entwicklung und Tourismus

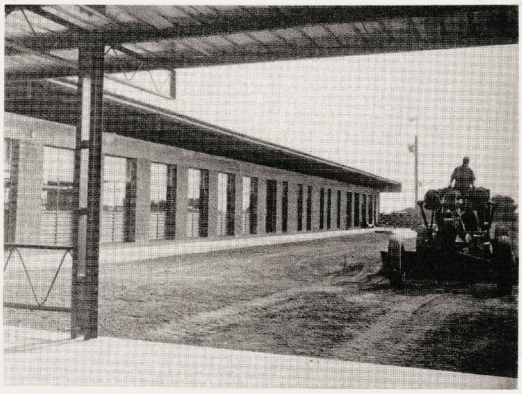
Planung:
Planungsbüro Fuhrmann, Düsseldorf
Dietrich Fuhrmann, Jörn Janssen

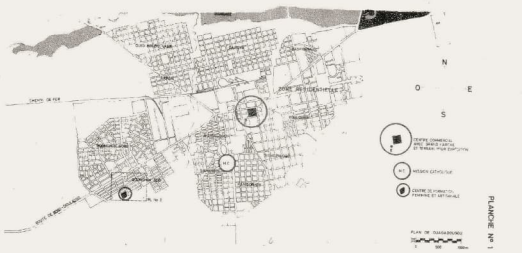
Klima:
Savannenzone

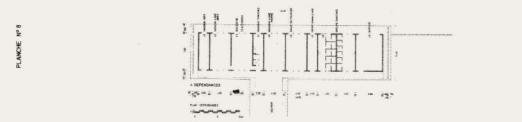


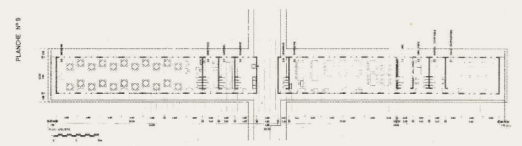
Maßnahmen:
Wärme- und kältespeicherfähige Mauern mit großen Fensteröffnungen zum Wärmeaustausch und zur Querlüftung (jahreszeitlich verschiedene Anforderungen). Dachüberstand 1,80 m, Gebäudelängsachse senkrecht zur vorherrschenden Windrichtung. Rückstrahlende Aluminiumdachhaut, belüfteter Dachzwischenraum.

Konstruktion:
Erdgeschossige Anlage in Ziegelsichtmauerwerk. Außenwände und Innenwände 20 cm stark. Rand- und Deckenbalken vorgefertigte (Baustelle) Stahlbetonelemente. Deckenplatte Ziegelhourdis, im Abstand Dachhaut aus Aluminiumblechen.









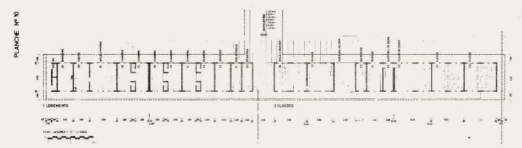


Figure 4: INFORMATION 1, published in 1970 by IFT.

Moreover, their varied body of work, which we describe in more detail in the following section, was received beyond the "Iron Curtain" (Lippsmeier, 1984; *Hochschule für Architektur und Bauwesen*, 1991).[13]

Circulating *Tropenbau*

While *Tropenbau* was undoubtedly IFT's most significant publication, the institute also produced and disseminated other forms of knowledge, notably in the form of newsletters and reports. IFT's newsletter, entitled *INFORMATION*, was published between 1970 and 1972 (Figure 4).

The first two issues were in German, but the subsequent issues were bilingual. In line with the approach tested in *Tropenbau*, the newsletters presented architecture projects in tropical regions. As well as short descriptive texts, sunpath diagram analyses, climate charts, architectural plans and sections, photographs and construction details, the project profiles included the addition of the tropical country's number according to the international decimal classification system (e.g. 663 for Senegal, 597.3 for South Vietnam) in an attempt to further collate the information for ease of reference. The newsletters also include a round-up of current events, including conferences and workshops as well as the laying of foundations stones and progress on projects, in relation to the field. *INFORMATION 3* includes a list of projects by German architects practicing in tropical zones, again suggesting a particular interest in national networking and consolidating and promoting German interests.

INFORMATION can be read in relation to other similar publications related to the field of tropical architecture. Following World War II, in the UK the Colonial Office published a series of pamphlets entitled "Colonial Building Notes" from 1950, rebranding them as "Overseas Building Notes" in 1958. These drew on research in the form of technical reports by architects and engineers active in tropical regions, that were compiled by the Building Research Station in Garston (Uduku, 2014; Fry, Knight, 1978). The *Tropical Housing and Planning Monthly Bulletin* edited by the planner Jaqueline Tyrwhitt was a similar experimental and exploratory collection of book digests, UN reports, conference proceedings, field reports, and her own editorial introductions and comments. The founding of the Bulletin in 1955, which was renamed *Ekistics* in 1957, was instigated by the architect-planner Constantinos Doxiadis, who saw it as a means to keep his staff, who were working in diverse locations around the Middle East, informed of the most recent international developments in housing and planning thought and practice.

The IFT's newsletter, however, cannot be considered separately from other practically oriented publications. The most, extensive of them were the reports—

in total, eight were published during the 1970s and 1980s. They serve as annexes of sorts to both editions of *Tropenbau* and give far more depth to matters introduced in *INFORMATION*.

In Report 2 on *Micro-climate and Comfort in Tropical Buildings* from 1973 (Mukerji, 1973) results of a long-term study of climatic properties of the hospital built by IFT in Mwanza, compared with observations from the hospital project in Da Nang provided the main empirical groundwork for the multilayered study of the topic—and in this respect we can say that L+P's projects were indeed sites of experimentation necessary for developing the practically informed expertise and further fine-tuning of architectural projects, while situating the own body of research within a much broader international discourse.

The wealth of practical expertise gathered through the involvement of the architects in all the stages of the construction process permeates these longer research publications. This also includes the execution phase during which the architect had—according to the author of these observations, who could have been Hans Demeter[14]—oftentimes to act as a site manager as described in Report 7 *Hospital Architecture* (Demeter, 1987). The message here is that IFT's authors were experts familiar with the realities of the construction business under various specific local conditions that require constant adaptability, for instance, due to the lack of resources.

DesignBuild practitioners often face similar challenges, taking a practical approach to architectural education that relies on an understanding of construction methods, materials, and processes. IFT's publications provided basic, concise, and filtered information about building in different locations around the world, which could support teachers and students in gaining knowledge before they travelled. The compiled information, while better equipping the students for the technical aspects of building, offered little by way of growing a socio-cultural un-derstanding of the local building practices and customs. This priming of experts might have led to conflicts on the ground (Arboleda, 2022), and to projects that failed because of a lack of consideration of local values and traditions that could not be replaced by merely respecting sun path diagrams or optimizing cross-ventilation. Through oral history collection and scattered fragments of correspondence of the IFT to be found in the CCA[15] collection we can establish that these practically oriented publications circulated within professional networks on a global scale, potentially impacting architectural education in diverse contexts.

IFT was approached by or sought contact to architects and engineers from South Africa (mostly from NBRI, National Building Research Institute from Pretoria), the

Asian Regional Institute for School Building Research (ARISBR), Colombo, or Australian institutions such as the already mentioned Research Committee on Solar Energy and Tropical Housing affiliated to the University of Queensland.

Conclusion

The diverse body of work of IFT including publications, research projects, and more ephemeral exchanges through different networks and platforms stem directly from the practical experience of L+P, while simultaneously offering groundwork for further projects. From the beginning it was addressed to a broad professional and academic audience, as its multilingual character demonstrates. Even if the activities of the binary design-research practice from Starnberg could be positioned within the context of the Cold War rivalry and under the assumption of the developmental agenda as proposed by Esra Akcan (Akcan, 2022), the analysis of complex circulations of knowledge proves that their architectural research and design practice cannot be interpreted solely within this specific framework. If we consider the context of long-term engagement with and continuous presence of the satellite offices of L+P in certain countries like Togo or Tanzania, as well as the multinational character of the architectural practice, this picture becomes more nuanced.

Nevertheless, the production of specialized knowledge about architecture design, planning, and building processes in tropical zones, and its communication through clear, aesthetically produced publications that emphasized its on-site application can be linked to the development of the DesignBuild movement in which students from the “North” work in short-term on-site assignments with materials such as those provided by IFT to implement design projects in the "South." The primers produced by IFT enabled such practitioners, arming them with technical knowledge about the contexts they were working in. These publications substantially lessened the need for engagement with local people involved in the design and construction of settlements, buildings, and infrastructure. This subjugated and “othered” local knowledge, much in the tradition of the 20th century approach to the development of tropical architecture.

1 A search of World Cat reveals that libraries in Africa, Asia, Australasia, Europe, and North and South America hold copies of the book. It is important to note that many libraries do not participle in World Cat, so the search results are not representative.

2 This would only have been possible based on further archival sources. However, the archive of L+P/IFT only contains very scattered correspondence.

3 Victor and Aladar Olgyay's *Design with Climate* (1963) can also be seen in this vein, although it relies less on analyses of existing buildings, focusing rather on the development and explanation of theories.

4 Numerous examples can be found in the IFT library (e.g. Joubert, S. J. P. *Air conditioning in the tropics*. National Mechanical Engineering Research Institute, South African Council for Scientific and Industrial Research (as well as many other publications stemming from the apartheid era in South Africa); Report on urban health center buildings. [New Delhi] National Buildings Organisation [1963]). Both the 1969 and 1980 editions of *Tropenbau = Building in the Tropics* include references to institutions in the Global South that were conducting research on aspects of tropical architecture. 32 of the 73 institutions listed in the 1969 edition were located in the Global South. In the 1980 edition, 22 of the 66 institutions were in the Global South. The bibliographies in the two editions also include literature published in the Global South, with Pretoria, New Delhi, and Roorkee emerging as publishing centers in the 1969 edition and Nairobi, New Delhi, and Pretoria featuring prominently in the 1980 bibliography.

5 Although we have no documentation of this, interview partners who worked with both L+P and IFT have indicated that the trade fair architectural work executed by L+P generated large profits.

6 In-depth interviews with Kiran Mukerji and Hans Demeter carried out in the autumn 2018.

7 Overview of existing examples, different solutions for solar protection of buildings, not only in tropical zones. This publication appeared simultaneously in Spain (Danz, Ernst: *La arquitectura y el sol: protección solar de los edificios*. Barcelona: Gustavo Gili, 1967) and reached architectural departments across Latin America (copies can be found from Chile to Cuba). Danz's work was already referenced in the first edition of *Tropenbau* in 1969.

8 These were replaced by black endsheets in the perhaps more conservative second edition.

9 Bouet offers a useful reference demonstrating how such seemingly objective diagrams might obscure or silence their colonial origins.

10 For a critical reflection on categories of comfort and (climatic) adaptability, see also the conclusion of Solano-Meza, Natalia. 'Aesthetics of Comfort: A Third Moment in Costa Rican Histories of Tropical Architecture'. *ABE Journal. Architecture beyond Europe*, no. 17 (2. September 2020). https://doi.org/10.4000/abe.8146

11 In the bibliography of both editions of *Tropenbau = Building in the Tropics*, the edition from 1945 was listed; Rodenwaldt, Ernst, *Tropenhygiene*, Stuttgart 1945. In the Lippsmeier collection hosted at the CCA, the 1966 edition is available (with the signatory library main georg lippsmeier 298990).

12 See G. Minke reports from IFT collection.

13 The Russian translation of *Tropenbau* appeared in 1984. Publications of IFT were available at the *Hochschule für Architektur und Bauwesen* in Weimar (HAB) – and as the ongoing research by the doctoral candidate Juliane Richter from the *Bauhaus-Universität* Weimar shows, the Chair for Building in the Tropics was taking a close note of the IFT activities. Thus, they indirectly also impacted the experimental teaching practice that bears similarities with the DesignBuild approach due to its hands-on attitude and similar mobility pattern.

14 As we speculate after the comparative reading of his publications and the interview in the fall of 2018.

15 The library of the IFT and fragments of the L+P archive were acquired by the CCA in 2017 from Antoni Folkers who managed the holdings after the closure of the office in Starnberg, thus preventing a further dispersal of the collection. At the same time, part of Kiran Mukerji's archive was also acquired by the CCA.

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Image Credits

1 The covers of the 1969 and 1980 editions of *Tropenbau = Building in the Tropics*
2a-b Covers of Maxwell Fry and Jane Drew's *Tropical Architecture in the Humid Zone* and Otto Koenigsberger et al.'s *Manual of Tropical Housing and Building*
3a-c Heinrich Lübke Regional Hospital in Diourbel, Senegal, architect: Lippsmeier + Partner. State: May 2022. Copyright: Rachel Lee
4 INFORMATION 1, published in 1970 by IFT

The Buhweju Project:

Planting the Future through Collaboration in Teaching and Learning

A steep, bumpy road must first be traversed to reach the Buhweju project site. At first glance, the simple unassuming buildings that can be seen through a small eucalyptus grove stand out. Their appearance and striking contrast to the surrounding built environment reveal that this is an experimental endeavor. The use of mono-pitch roofs and exposed brick with fine mortar joints is uncommon in this part of Uganda (Figure 1). While consistent among themselves, the buildings present a contrasting aesthetic to those of the surrounding villages. This difference is evident in internationally led DesignBuild projects and will be explored in more detail in this chapter, along with other project development steps.

Prof. Victoria von Gaudecker initiated the Buhweju DesignBuild project at the *Technische Universität München* (TUM) in 2018. It was to serve as a platform for the exchange of knowledge and ideas between students through the design and construction of a series of buildings in southwestern Uganda. While the brief for the project was modest—to develop a training facility for the Swiss-based NGO, Kids for Africa—the method turned out to be ambitious, with four universities engaged simultaneously, three in Germany and one in Uganda. The theme of this initiative was "Planting future," which, as the project brochure claims, "[...] can only succeed if everyone involved acts in concert constructively and is willing to learn with and from each other despite all differences" (Von Gaudecker, 2022). The planting metaphor elucidates two of the development's intentions, on the one hand, to literally plant a forest on the site and on the other to lay the seeds for educational collaboration as part of the engagement. These ideas were implemented through a series of interactions between the students who participated in the different phases of the scheme. The last of these was working together on the construction site in Uganda.

As with many DesignBuild ventures, the Buhweju project grew out of a personal relationship, in this case, university professor Victoria von Gaudecker and Burkhard

Figure 1: View across to the Community Buildings, 2022.

Figure 2: Scenic Landscape of Buhweju, Western Uganda, 2022.

Varnhold, the founder of Kids for Africa, which runs an orphanage based in Entebbe, Uganda. Buhweju village is a six-hour drive from Uganda's capital, Kampala. The site sits on a flat-topped hill with breathtaking views of the idyllic countryside that surrounds it (Figure 2). Kids for Africa wanted to create a well-designed complex of buildings offering short courses in textile design, carpentry, and other crafts as part of Kids for Africa's commitment to teaching new skills to orphans in its care. By the end of August 2022, two phases of construction had been completed: the general community and training blocks and one of the accommodation blocks. Given the COVID-19 restrictions that brought the site to a standstill in March 2020, this was a gratifying result.

A design community

"By nature, the DesignBuild educational studio is also positioned on various boundaries within the landscape of architectural knowledge and practices" (Delport, 2016). For the Buhweju project, the primary framework was determined by the function of the development and the need to achieve stipulated educational objectives while meeting students' expectations. Outside the academic setting, there were also the expectations of the client, in this case, Kids for Africa, as well as those of the local community for whom the project was constructed.

The scheme was led by academic faculty from the *Technische Universität München* (TUM), along with two other universities in Bavaria, *Hochschule München* (HM) and *Hochschule Augsburg* (HA), and a university in Uganda, Uganda Martyrs University (UMU). Cross-institutional educational collaborations are an ambitious undertaking given differences in academic goals, schedules, and student abilities. Coordinating heterogeneous groups is a daunting challenge in itself and often presents a barrier to cross-institutional collaboration (Altbach, Knight, 2007).

In this instance, the implementation of the Buhweju development illustrates the value of collaborative effort. The involvement of Uganda Martyrs University emerged from an existing working relationship with the *Hochschule Augsburg* under the European Union-funded joint development of courses for energy efficient and sustainable housing in Africa (JENGA) project. The project brought together academic faculty and students from four universities: *Hochschule Augsburg* (Germany), Jomo Kenyatta University of Agriculture and Technology (Kenya), Uganda Martyrs University (Uganda), the University of Rwanda (Rwanda), and Stellenbosch University (South Africa). The project, coordinated by Prof. Susanne Gampfer of the *Hochschule Augsburg*, aimed to build academic capacity through knowledge transfer to promote energy efficiency and low-carbon technologies in architecture. It also explored methods to embed field-based activities into architectural education while providing an opportunity to test innovative building materials and techniques in a local context. Incorporated within the JENGA project

Figure 3: Build Materials Exploration, Hochschule Augsburg, 2013.

Figure 4: Poured Earth Workshop with architecture students from Uganda Martyrs University and the University of Rwanda, 2014.

was a desire to get students out of the proverbial studio[1] to ensure they gained an understanding of architecture production and construction techniques which are absent in some architecture programs (Figure 3). Explorations ranged from scale models to full-size constructions and experiments with alternative materials, in this case, poured earth construction (Figure 4). The outcomes formed the basis for the publication of the *JENGA Handbook* (JENGA University Cooperation, 2017), which consisted of project documentation and field reports that fed into the planning of the Buhweju scheme.

There was a desire for true collaboration among students from the four participating universities to allow for cross-cultural understanding and to ensure that all participants were included in the project. This goal, formulated early in the process, is the starting point for the present evaluation, explored through interviews with students in Germany and Uganda. This open exchange with them about their experiences with the DesignBuild method prior to visiting the chosen site was important in understanding the challenges faced by the students. The discussions formed the basis for exploring the project and its role in facilitating collaboration as one of the goals. It was intriguing to note some of the reasons why the students chose to participate in the development:

> **"I was interested in working together in a group. I also like to work with my hands. This was a great way to really understand and to complete what you started at university."** *Christof (TUM)*

> **"I was interested in seeing how we can study and design in a different area and with different materials and was interested to know other cultures."** *Ana (TUM)*

> **"I was inspired by the fact that it was an out-of-school program, so I had a chance to meet different people, and engage with them and talk to them or work with them, and secondly, to interact with their different system, because our class is an undergraduate program, and they are at a higher level."** *Natalie (UMU)*

> **"When I heard that there were going to be different students from other universities, I was so eager to know what they do back there in Germany and also to learn from them."** *Sophia (UMU)*

The students' enthusiasm reflected the expectations they had and the value they placed on collaboration. However, as it turned out, the ability of Uganda Martyrs University to participate in the design phase of the project was hampered by poor timing. Staff shortages in the Faulty of the Built Environment prevented participation in the design and development phases. This also affected the construction phase, as will be discussed. Further complicating matters was the fact that students at the various universities were at different stages of their architectural education. The students from Germany were mostly in the third year at the beginning of the process, and the selected plans came from a third-year design studio. Many of the students who participated in the competition chose to continue with the design documentation and building phases of the project. By the time the project reached the construction phase, they were in the Master of Architecture program. However, students from Uganda were in the second and third year of the undergraduate program. This placed students in a vertical studio, a means to achieve co-learning and collaborative learning as an outcome (Francis, Garbarczyk, 2018). However, this led to apprehension among some of the students related to the unequal engagement at the beginning of *the* project. The students from Uganda were initially afraid to engage in decision-making because those from Germany were more advanced in their educational careers.

Design development

The initial phases of the project were intended to be a shared academic experience, for which virtual meeting platforms were used. However, the lack of involvement of students from Uganda during the conceptualization, design development, and construction documentation phases presented an obvious challenge. As a result, students in Germany were compelled to work without an accurate understanding of the local conditions. The Kids for Africa organization had undoubtedly provided some contextual information that, while sufficient for an academic exercise, proved inadequate for a real-world project. One of the biggest challenges was the lack of accurate site information, resulting in assumptions being drawn about the extent and topography of the site.

These could not be derived from the rudimentary sketches provided (Figure 5). Furthermore, a limited understanding of the tropical climate variability and a very superficial knowledge of traditional buildings influenced the direction of the project. For example, what was described as a "typical Ugandan village" correspond to the image of a settlement in northern Ghana more than 5,000 kilometers away (Figure 6).

To be fair, this misconception is not unique to the current endeavor, with students worldwide increasingly relying on the internet to find information and precedents, often with the aesthetic value of a design foremost in mind and with little concern for technical or cultural relevance. The inevitable transference of ideas without reference to context is a growing challenge for architecture students globally, and thus one that requires urgent attention within architectural education.[2] Climate is also often simplistically divided into three major zones based on latitude: tropical, temperate, and arctic. This approach obscures the specifics of climate, which in this case is very different from what is perceived as the epitome of tropical: hot and humid all year round. This, however, is far from the reality of the highland region of southwestern Uganda where Buhweju is located. One way to address this difficulty

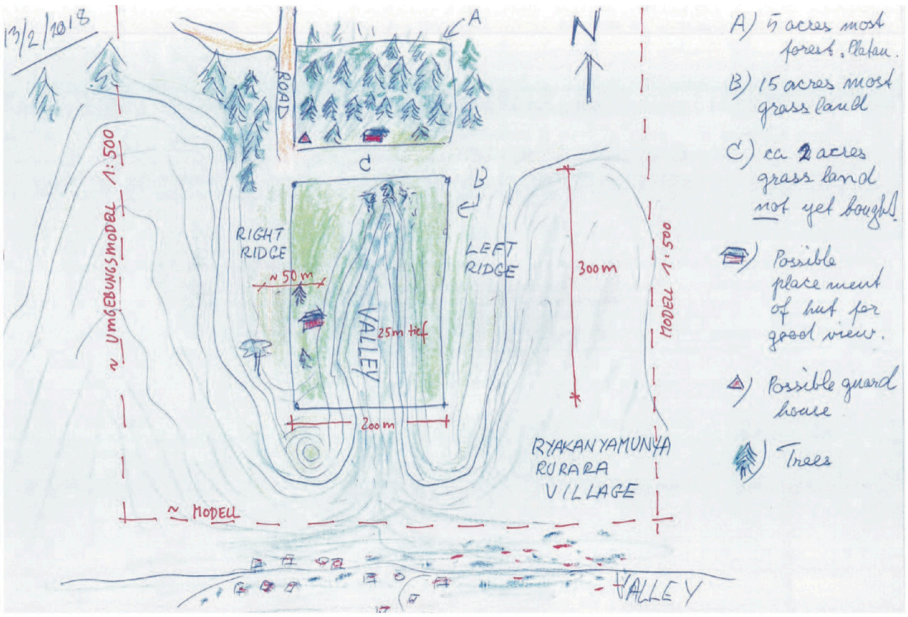

Figure 5: Sketch of site provided to the students.

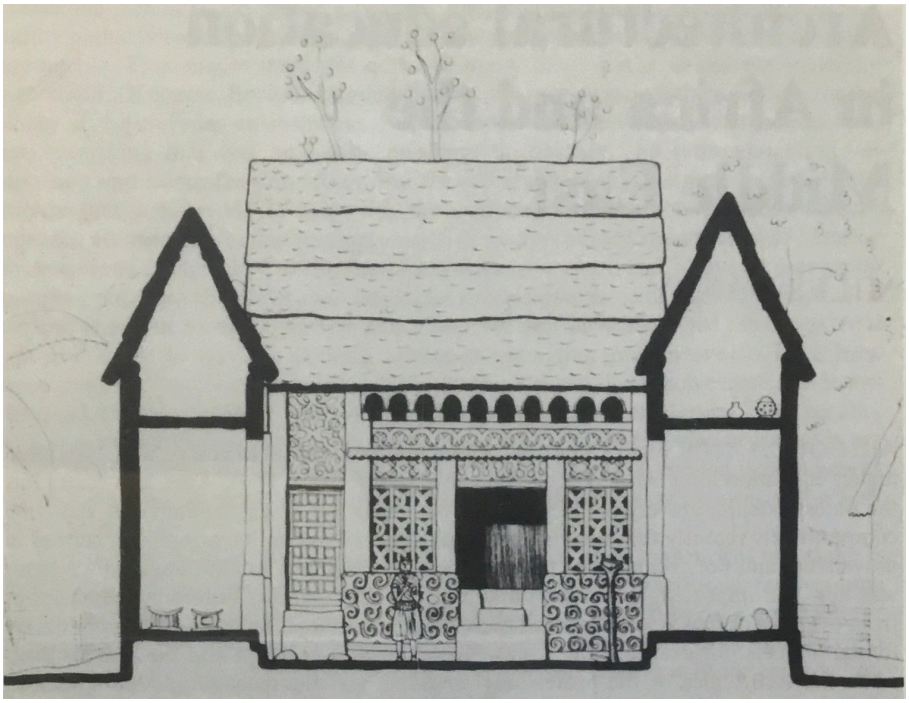

Figure 6: Ashanti Fetish House, 1983.

in the architectural design process is to ensure precedents are properly referenced; collecting the project titles, their locations, the date of completion and information about their designers (if available). This would contribute to better interrogation of precedents and their importance (or lack thereof) to the development of design ideas. The absence of an in-depth investigation illustrates how educational goals sometimes conflict with real-world conditions. DesignBuild projects are more than merely academic endeavors—they have real-world consequences.

As a real-world project, consideration of context would have been crucial. Here, the absence of students from Uganda during the early phases of the process was glaringly apparent, as was the lack of collaboration with local professionals to obtain vital information about the context. While discussions were held with Felix Holland of StudioFH (Kampala), this happened on a limited basis. During the interviews, students who worked in Germany highlighted the lack of site-specific information on the local climate and available materials as problematic. In their opinion, this affected their ability to explore design possibilities, resulting in significant changes to the design once they finally arrived on the site. For example, they had to account for a slope that had a much steeper gradient than initially anticipated. The redesign

Figure 7: Buhweju Site Layout (Centre - Living cluster, Right - Sleeping cluster), 2019.

required significant level changes that increased the cost of the project. Another change was a result of assumptions of a generic hot tropical climate. This led to an open, airy design, however, with Buhweju situated at an altitude of 1,900m above sea level, the assumption of a balmy tropical climate with hot days and warm nights was inaccurate. Instead, nighttime heating is required for part of the year.

It remains to be said, that regardless of the challenges in attaining contextual information due to the absence of students from Uganda during the early phases of the project, the work carried out by the students in Germany was original and innovative. Innovation is an important aspect of DesignBuild projects, which often seek to provide facilities that go beyond or reinterpret what is found in the local context. These often aim to serve as prototypical projects, an inspiration to a community, or a catalyst for community transformation of the community by enabling the "diffusion of innovation" (Martin, Garner, Manewa, Chadee, preprint). There is no denying that the Buhweju project aimed to be progressive in its context. The project used courtyards to define the different use clusters—for "living" and "sleeping" (Figure 7). The compact nature of these courtyards is reminiscent of spaces found in densely packed urban transitional settlements across Uganda (Kirabo, Olweny, 2022). These outdoor spaces function as shared outdoor activity pockets, an extension of formal enclosed spaces.

Construction and collaboration

To ensure the project could fit within the academic schedule of the different universities, the spatial program and specifications were intentionally kept simple. The result was small buildings with simple forms that could be completed in phases. This was also to ensure that the students as novice builders could construct the buildings themselves. The design assumed the use of standardized brick and timber modules; however, this assumption was, in fact, without basis. The available brick and timber dimensions did not match those used in the design documentation. This created a conundrum for the designers: either redesign to fit the materials available or find materials that were compatible with the plan. The solution found reflected the nature of the construction industry in Uganda, where the cost of custom materials—in this case, bricks—was the same as what was commonly available (Olweny, Ndibwami, 2022). It was decided to produce custom bricks that matched the design. To this end, a brick mold was designed and fabricated. This on-site improvisation illustrated the possibilities of DesignBuild projects, where it is necessary to be flexible and innovative to the very end. Nevertheless, this problem could have been avoided if local students had been involved from the beginning (Figure 8).

The first construction phase began in 2019, the first time that students from the four universities had come together or had visited the site. For the German students, it was also their first trip to Uganda, which proved to be a culture shock, especially as they ventured into a remote part of the country with few modern conveniences. One could argue that this was an advantage, as the participants were compelled to work toward the common goal. Given the limited time they were to spend on site, it was critical to reconcile their different perceptions of the project and the goals of the construction phase. This proved difficult given the accommodation arrangements in Buhweju, as students from the participating universities were spread across the village in different accommodation facilities, limiting social interaction. This also resulted in what the students described as parallel rather than collaborative work. It took a week to solve this issue by forming work groups that included German and Ugandan students as well as local workers. This arrangement proved invaluable in facilitating the exchange of knowledge and ideas and in achieving the project's core goal of fostering collaboration. The limited involvement of UMU students during the early phases also posed some problems on-site. When they arrived, they did not have full knowledge of the intentions of the project, and with many decisions already made, the UMU students felt that they could not make any meaningful contribution to the project beyond providing construction labor. As previously mentioned, this was less of an oversight by the project initiators than a consequence of timing.

Figure 8: Completed Living Room Block, 2022.

Figure 9: Brick Screen Wall designed by UMU students, 2022.

A key element for the success of the DesignBuild method is that participants take ownership of their work. For UMU students to participate in the Buhweju project, they were allocated two design tasks to build their confidence and to ensure their inclusion. The two tasks they were allocated, designing a screen for the water tanks and selecting planting for the site, were small, but nevertheless important in helping the UMU students feel part of the design process. As Natalie, one of the UMU students, pointed out, "This was to be a collaborative exploration of design and learning about the intricacies of the design process." Indeed, this gesture was able to allay the UMU students' fears while also ensuring all participants progressed together as a group (Figure 9).

Influence on the community

DesignBuild projects are at times portrayed as a form of community service influenced by, and in turn, impacting a community (Canizaro, 2012). In the case of the Buhweju scheme, initiated not by the local community but by an NGO based 300km away in Entebbe, the question about the involvement of the local community is crucial; and it was precisely this that became a point of contention. For the students from Germany, the challenge of working on a project designed in the Global North for a location in the Global South was a constant concern. They were conscious of growing criticism of this educational method which has been described as "architectural (and educational) colonialism" (Berlanda, 2015) and "volunteer tourism" (Bandyopadhyay, 2019). Their position, privileged for various social and cultural reasons, allowed them to question the lack of interaction with the local community and the limited participation in the construction process, apart from contributing occasional labor. This concern was heightened when the NGO demanded that a fence be erected around the site. They felt that the requested measure underscored their fear that this was not a project for the local community. They then tried to convince the NGO that a fence was not the most appropriate solution and argued that hiring people from the community as security guards would be a more socially responsible way to ensure security. Beyond this discussion, activities on-site resulted in the exchange of ideas brought about by the sight of a significant number of female students working on site, which caught the attention of the local population. For them, it was an unusual sight to see women on a building site, an activity generally dominated by men. This meant that during the day, when construction was in full swing, there were always members of the community present, which led to discussions about career opportunities for women in the construction industry. There was also a lot of talk about the design layout and the use of the buildings being constructed, as they were different from the traditional structures around the site.

The community also raised questions about one of the spaces within the project, the "community kitchen," which drew special attention during construction. This kitchen is reminiscent of the "Frankfurt Kitchen," and is very different from what is

normally found in the local community. It thus provided a clue to the intended use of the scheme by non-local guests. The provision of a second kitchen just a few meters away for use by the resident staff confirms this assumption and points to the project's goals: it is not intended for the local community, but rather for affluent guests who come from afar. The kitchen included a beautifully crafted mahogany timber island unit. The timber had been specifically procured for the purpose—a testament to the students' aspirations for their project. However, the presence of the two vastly different kitchens illustrates the divide between the intentions of Kids for Africa and that of the Buhweju community. Tensions surfaced during the construction phase of the project when students indicated they had to deal with unresolved issues between the NGO, the construction workers, and the local community. This represents an important finding as it demonstrated that DesignBuild projects must look beyond architectural practice to consider social and local conditions as well.

Figure 10: Island Unit in Kitchen, 2022.

Achievement of objectives

Overall, students were positive about their experience and enthusiastically stated that working on the scheme had a substantial impact on their views of architecture. This is where the value of a collaborative approach is most evident. Certainly, there were tensions on site, in some instances related to language and cultural expectations. These were generally resolved as the project developed. Some important lessons can be drawn from this: The participants were not only concerned with designing and constructing a building but also with developing an understanding of the

Figure 11: Courtyard, office, and dining room, 2022.

complexities of the design and construction industry. This DesignBuild project resulted in the construction of a series of complete habitable buildings that are currently used by the NGO for its activities. This is an achievement to be celebrated, especially since most of the construction had to be undertaken during the COVID-19 pandemic. The lockdown had resulted in a prolonged hiatus between the first and second phases of the construction, but in some ways, this benefited the project.

This time was an opportunity for the team to reflect on initial ideas and revisit some of the decisions and challenges encountered during the first phase of the development. In addition, the return to the site after the lockdown demonstrates the tenac-ity of participants constructing a set of buildings under difficult conditions. Certainly, the completed project is not a refined piece of architecture, after all, it is first and foremost an experimental and educational scheme. Nevertheless, aside from the construction of buildings, the opportunity to collaborate with students from across the globe presents an invaluable outcome of the endeavor. Indeed, all students in-dicated that they left with good memories after their experiences in Buhweju. Some of the German students extended their stay in Uganda after completing the project. Two students from Uganda subsequently visited Germany to participate in a capacity-building program in Berlin and Munich. While this aspect is not cent-ered as part of DesignBuild learning methods, it provides invaluable outcomes to this educational activity.

Reflections

While the buildings on site remain as a physical reminder of the DesignBuild project, the pedagogical outcome goes well beyond the construction. For example, collaboration was fostered as a key learning outcome, ensuring that students stepped out of their comfort zones to engage in activities not normally found within a traditional design studio pedagogical approach. This is one of the more important outcomes of this project and an important takeaway from the experience. There was also an attempt to address the criticisms of typical academic tourist projects, even though the design team did encounter some challenges here. Regardless, the Buhweju development provides important lessons that can contribute to better project outcomes in future DesignBuild endeavors.

These include:

- **Local students:** A need to include students from the local context who can contribute to a better understanding of the site and the community, among other things.

- **Collective involvement:** The need to involve all students from the start to ensure ownership of the scheme and to encourage open dialogue between the different student groups.

- **Local community:** Involving the local community at the building site. This will ensure that the local community can develop an interest in these projects.

- **Clear goals:** Ensure that all stakeholders support the goals of the project.

Taking the above principles onboard would encourage a shift from the view "that architectural education is about developing individual skills to design 'our own' creations, to the view that architecture is an inherently interdisciplinary and collaborative form of artistic expression (Nepveux, 2010)."

Regardless, of the complexity of developing a collaborative DesignBuild project, discussions about this learning format often overlook the fact that collaboration is critical to their success (Delport, 2016) and ultimately for the practices of architecture. The inherent tensions between educational aspirations and the realities of the local context leave unanswered questions about the impact of such projects on the local community. DesignBuild schemes cannot be mere experiments inflicted on unsuspecting recipients in the Global South. This means that it may be necessary to rethink DesignBuild processes such that they contribute to the communities. Notwithstanding the challenges in completing the construction at Buhweju, the value of this project in contributing an understanding across different communities by planting seeds for future collaborative engagements should be recognized. This acknowledges that DesignBuild projects are only viable if they go beyond the typical academic objectives where the consequences related to design decisions are often not questioned. Reconciling this often-conflicting agenda remains a challenge for any international DesignBuild project to ensure that such efforts have a lasting impact beyond merely fulfilling their educational goals.

1 In this case the studio as both a physical construct an teaching approach.

2 While there is no denying the importance and value of the internet as a source of knowledge and information, it is increasingly necessary to help students navigate our world. The urgency of this is seen in the emergence of AI as a new means of deriving information. Without an appropriate means of deciphring information, it will be increasingly difficult for students to determine how to make the most of the information presented to them.

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Image Credits

1, 2, 3, 4, 8, 9, 10, 11 Mark Olweny
5 Kids for Africa
6 Miles Danby /Danby, 1983
7 TUM

Pursuing an Architecture by Demand

Opportunities, Entanglements, and Tensions in Two DesignBuild Projects in Ecuador and Mexico

Beyond technical and spatial interventions, it is no secret that DesignBuild projects are primarily social processes, embedded within broader structures and dynamics. On a smaller scale, they are shaped by the specific academic and user communities that advance them, the type and goals of each project, the constellation of collaborators involved, among other conditions. At the same time, these specific circumstances do not take place in a vacuum: they unfold within society's broader context and structural conditions—including the diagrams of coloniality, patriarchy, and capitalism. As white-coded *mestizo* Ecuadorians[1] who had access to formal education, we recognize that DesignBuild projects are—and our participation in them is—fundamentally affected by the asymmetries that sustain these systems. However, rather than assuming a form of inescapable structural determination, we argue that these projects also mobilize significant forms of agency that can either help defy or perpetuate the social and political structures within which they operate. Consequently, we contend that DesignBuild projects resonate with long-standing discussions about how the environmental design disciplines continuously choose between operating in system-sustaining or system-challenging ways (Marcuse, 1976).

In that sense, we argue that it is primarily in the decisions that *precede* design and frame the rest of the undertaking where unequal power relations and structures—including but not limited to colonial asymmetries, narratives, and biases—can be most fundamentally challenged. This chapter focuses on the Chamanga Cultural Center in Ecuador and the Center for Culture and Ecology Quiané, in Mexico, where we participated as project co-directors alongside a variety of academic and social organizations. Based on our own experiences as non-academic and academic participants in each project, we write this piece as part of an ongoing effort to integrate reflection and action throughout our practice. Whereas in Chamanga

Figure 1: Marimba and oral tradition classes with Linver Nazareno in the Chamanga Cultural Center, May 2018.

we collaborated shoulder-to-shoulder with situated community organizations to embed DesignBuild into local processes of mobilizing, in Quiané we took part as academic instructors at the Munich University of Applied Sciences. Using both projects as entry points, we discuss how we have tried to position ourselves and the projects vis-à-vis some of the common tensions and power dynamics in the practice of the DesignBuild methodology in particular, and the environmental design disciplines more broadly.

In particular, we are interested in untangling how we seek to situate ourselves—and by extension, the DesignBuild projects in which we take part—as collaborators in, participants of, and contributors to specific social movements, groups, and organizations who are themselves *collective subjects of transformation*[2] mobilizing to disrupt unjust power structures. We believe that as other practices and methods of socio-spatial action, DesignBuild can—at its best—be mobilized to contribute to the struggles of those collectives. In turn, this approach demands foregrounding the broader socio-political agenda set by the grassroots organizations that demand our support, rather than conceiving them as generically defined "communities," who receive objects—or participate in processes—produced and led by DesignBuild programs.

By framing DesignBuild as one possible way of contributing to the specific demands and agendas of broader mobilizing processes, we have aimed—shortcomings notwithstanding—to advance a politicized[3] form of DesignBuild. In that sense, we borrow from Argentinean decolonial/feminist anthropologist Rita Segato, in pursuing an *architecture by demand*[4] that is shaped by our solidarity with localized struggles and mobilizing processes. We believe that this approach allows us to participate in broader struggles for the subversion of unequal power structures at different levels and scales. In other words, that DesignBuild can indeed allow students and instructors to hone and utilize their design, detailing, construction, and listening skills, among others, while co-producing meaningful social processes and spatial interventions that contribute to the broader goals of situated mobilization. In the following sections, we discuss how we pursued this approach in both projects, while drawing attention to some of the contradictions and shortcomings of each process.

The Chamanga Cultural Center: Embedding DesignBuild in a post-earthquake context

One of our first times in Chamanga, Jaime A.[5]—an experienced local schoolteacher—met us in front of "Campground 2," a temporary tent shelter for 72 displaced families set up by the military. Just a few months before, on April 16, 2016, a 7.8 magnitude earthquake hit the coast of Ecuador. Even though there were no casualties in Chamanga, over eighty percent of structures were severely damaged and declared uninhabitable. The waterfront was rezoned (Figure 2), prohibiting residential uses (MIES, 2017), forcing a large percentage of the population to relocate farther inland—first to temporary shelters and then to highly alienating government-built housing schemes (see Waldmueller, 2020).

Guiding us throughout Chamanga, Jaime insisted that this region faced many challenges *before* the earthquake, including its exclusion from potable water and sanitation networks, and the systematic destruction of mangrove ecologies, primarily to make way for the shrimp industry. Jaime's claims alluded to layered forms of marginalization, exploitation, and dispossession that *Chamangueñxs* struggle against, as confirmed by the last census, which noted that a hundred percent of Chamanga's population had its basic needs unmet, even before the April 2016 earthquake (INEC, 2010). Unfortunately, this is not unusual in Esmeraldas, one of the country's most impoverished provinces, not coincidentally home to the largest percentages of Afro-Ecuadorian inhabitants. In Chamanga, the earthquake accentuated pre-existing forms of social, economic, and ecological crises, tied in turn to global processes of resource extraction (Waldmueller, 2020) and their entanglements with colonial frameworks of racialized dispossession and class-based exploitation on these territories.

Figure 2: Chamanga's waterfront, aerial view, December 2016.

Following the earthquake, civil society, universities, and collectives from Ecuador and abroad mobilized alongside locals and public institutions to alleviate the emergency. Many of our Chamangueñx interlocutors and partners insisted that during the first weeks and months, the intervention of outside organizations was crucial for the provision of immediate needs. Organizations, such as the architects collective Actuemos Ecuador, based in Quito, and Unidad Campesina Palenque (UCP), an Afro-Ecuadorian and peasant organization based in Chontaduro, northern Esmeraldas, provided technical and logistical assistance to local groups. For example, they supported the neighborhood assembly of Nuevo Amanecer in the planning and execution of a self-managed emergency camp and its communal house, dedicated to collective care tasks. Similarly, the Catholic University of Quito (PUCE) led a multidisciplinary program of collaboration with Chamangueñx authorities, which helped root the intervention of centralized government institutions in local needs and demands (see GAD-PSJC, 2016; Maron, 2017; PUCE, 2016).

However, six months after the earthquake, many of our local collaborators in Chamanga claimed that the presence of university programs was beginning to resemble a somewhat extractive endeavor. Although students and professors from many institutions were eager to produce diagnostics of Chamanga, or to develop proposals for the town's recovery, the sense was that they played no role in improving people's living conditions. During conversations with local partners and friends, they often argued that "people from the city just come and go": after finishing their surveys, maps, and designs, academic programs often failed to share the information with the local participants who had invested time and energy in their development. The overall feeling was that *Chamangueñxs* were considered mere objects of study, and their territories turned into learning laboratories.

Within this context, alongside our colleagues from PUCE, UCP, and other academic and social organizations, we advocated for university institutions to contribute in tangible ways. Reading our involvement in Chamanga as imperatively tied to making our individual and collective "toolset" available to local efforts, we saw that strengthening construction processes was one way in which we could help improve post-di-saster conditions—albeit minimally. As a result, for example, academicworkshops in which we participated[6] created urban design visions for the long-term, while also allocating time for hands-on components such as the collective finalization of toilets in the self-managed shelter in *Nuevo Amanecer* alongside local inhabitants.

This approach resonated amongst different academic organizations involved in the workshops and evolved into an interest in developing a larger DesignBuild project, initially spearheaded by Portland State University (PSU) and the University of Tokyo (UT). In our role as on-site project co-directors, we sustained a process of participatory action-research and *convivencia*[7] with local organizations and partners, through which we aimed to anchor the academic interest in a DesignBuild project to ongoing forms of localized mobilizing. The goal of this was to ensure that universities *followed* the agendas and demands of local organizing, rather than the other way around.

Good intentions lacking local agency: The idea of a women's center

When discussing alternatives for a DesignBuild project, academic partners pushed for developing a women's center for *Chamangueñas*. At first glance, the project idea could be read as egalitarian and vindicative for women, because it resonated with empirical and quantitative data that evidenced high levels of domestic violence against women and high teenage pregnancy rates, among others (GAD-PSJC, 2016; INEC, 2010). However, we were skeptical about moving forward with it, since there was neither an organized local collective behind the project, nor a specific demand from the different women's organizations in Chamanga for such a space.

Despite its good intentions, we argued that pursuing a center for women without any demands from local organizations followed a paternalistic logic that ignored *Chamangueñas'* agency. Although several women's groups were active in Chamanga, neither had requested a shared center nor were they interested once we approached them to discuss the idea. While the proposal aligned with politically correct narratives of gender equality, it lacked footing in local mobilization. Though valid as an abstract idea, this would have meant positioning ourselves as external "knowers" rather than as collaborators of the broader situated struggles of organized collectives. As such, and despite our fundamental alignment and close collaboration with feminist organizations, we opposed the project based on its well-meant, but fundamentally top-down conception. If pursued, the project would have been biased by the team's stereotyped conceptions and assumptions about women in Chamanga, rather than led *by* the lived experiences, collective agendas, and resolutions of *Chamangueñas*. Within the context of the project, this would have run the risk of aligning the process with narratives and practices of development,[8] white saviorism,[9] and white feminism,[10] rather than with those of mobilization, emancipation, and solidarity.

Figure 3: Opción Más core group assembly in Chamanga, November 2017.

Figure 4: The Chamanga Cultural Center, May 2018.

Opción Más: Underpinning an ongoing process

Meanwhile, we had connected with a local *Chamangueñx* collective called Opción Más (OM). Running cultural programs since 2009, OM's mobilizing had a strong footing in the community that long preceded the earthquake. From our first encounter, the leaders of the group, Sol G. And Baltyn L., explained that their work focused on providing learning opportunities for children and youngsters, while strengthening local Afro-Ecuadorian and Montubio heritage.

This was relevant in at least two ways. First, OM focused on supporting children and youngsters, whose precarity and vulnerability was simultaneously symptomatic and constitutive of the layered forms of exploitation and marginalization that *Chamangueñxs* have historically struggled against. Second, OM's insistence on strengthening territorialized forms of cultural practice and identity had a particular significance amidst the compound displacements that *Chamangueñxs* faced: Following decades of systematic destruction of the mangrove ecosystems they are a

part of, they were now confronted with successive relocations after the earthquake. Through programs that focused on dance, music, and poetry, OM worked against the very same structural issues that Jaime A. had described on our first visit to Chamanga. Though described by local organizations on different terms, these "issues" illustrated the historical production of profoundly colonial social and environmental injustices, associated with forms of ontological occupation (Escobar, 2020) and racialized dispossession—on both material and cultural terms.

Despite the deep structural resonances of OM's efforts, their work had been significantly decimated after the 2016 earthquake destroyed the rental house where they operated. While remaining active through itinerant programs across Chamanga and using a makeshift porch in front of the leaders' house as a center of operations (Figure 3), OM began to mobilize for the construction of a cultural

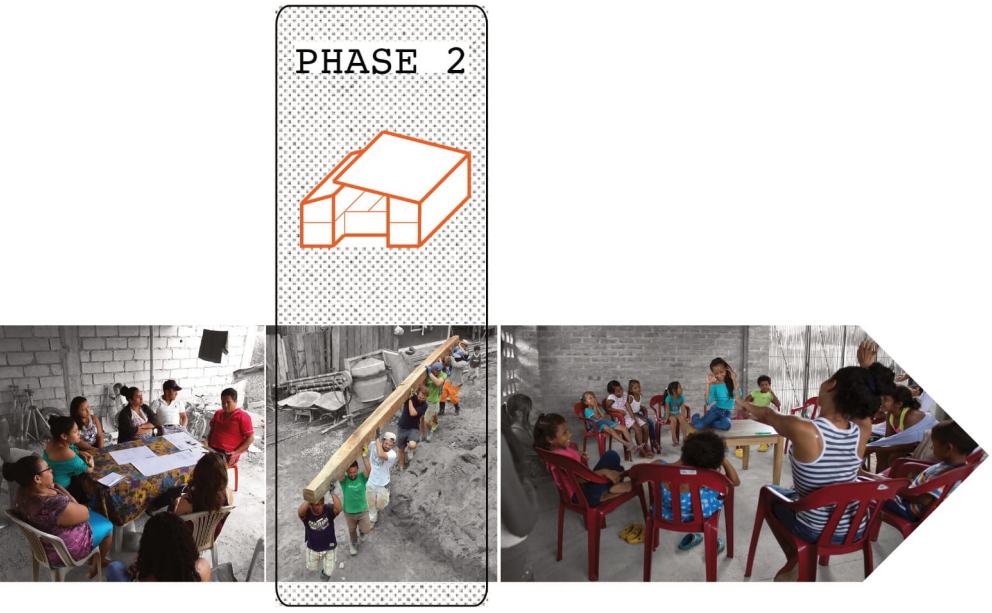

Figure 5: Embedding construction within Opción Más's longstanding process.

center. With the support of Movimiento Mi Cometa (MMC), an organization from Guayaquil, they acquired a parcel of land on the upper plateau of Chamanga, in one of the few consolidated neighborhoods of the city before the earthquake. Unfortunately, the project stagnated after a year.

Within this context, we proposed that supporting OM in its ongoing process to build a cultural center was the most appropriate way for the academic coalition to contribute to a local struggle. In this way, we sought to position ourselves and the other DesignBuild project participants as collaborators of OM's process, rather than as "knowers" advancing a project according to our own priorities. Contrary to the women's center idea, this approach allowed us to frame the DesignBuild endeavor as an exercise of academic solidarity with the demands of an ongoing grassroots mobilizing process. This meant that the different perspectives and

modes of operating of each university program would unfold within a shared framework that foregrounded OM. In other words, the entire collaboration was structured by the decisions that preceded the design process, which framed our involvement in Chamanga as secondary participants in OM's trajectory—rather than as proponents of so-called *"projects for the benefit of the community."* Consequently, the workshops, assemblies, and charrettes we participated in alongside OM and other local allies were not a tool to *have local participation in our project*, but opportunities to *embed ourselves in their process* in meaningful ways (Figure 5). In that sense, our pursuits resonated with Costanza Chock's (2020) formulations on design justice, which demands "a willingness to bring design skills to community-defined projects, rather than seeking community participation or buy-in to externally defined projects" (p. 178).

Quiané Center for Culture and Ecology

In 2018, based on our collaboration in Chamanga, MUAS Professor Ursula Hartig invited us to co-teach the DesignBuild studio in Munich. When we joined the team, the project was already defined: a Center for Culture and Ecology in Santa Catarina Quiané, in the central valleys of Oaxaca, Mexico. The project emerged from the specific demand of a coalition that included local authorities of Quiané and the *Frente por la Defensa de la Tierra* (Front for the Defense of the Land - FDT)[11] to create a space for activities that either had no space or were scattered in ad-hoc infrastructures throughout their territory. Threatened by the joint forces of real estate development and the state government to privatize communal territories, *Quia-netecx* authorities and the FDT had been mobilizing for over a decade with the support of CAMPO,[12] a local organization with which Prof. Hartig had a long-standing relationship.

Social tenure and land defense: Quiané as part of a broader struggle

Rather than as an isolated case, we see the struggle of Quiané as part of broader anticolonial and anti-capitalist trajectories for the restitution of Indigenous territories and communal lands. In Mexico, the formal recognition of collective land rights was one of the results of the Mexican Revolution, formalized through the Constitution of 1917. However, the reform of Article 27 in 1992, associated with the approval of the NAFTA free-trade agreement, enabled their (re)commodification and privatization (Assies, 2008; Azuela, 2019; Sánchez & Díaz-Polanco, 2011).

Quiané's collective ownership and management of land, specifically, emerges from the struggle of local *Hacienda* workers in the 1960s, who reclaimed their territorial rights while echoing the Revolution's demand—and legal heritage—to recognize that *land belongs to those who work it*. Sixty years later, *Quianetecx* efforts to build a Center for Culture and Ecology animates a broader repertoire of resistance to colonial processes and rationales, epitomized by the threat of (re)-

privatization and dispossession of communal lands. On the one hand, the center aimed to provide a place for the celebration, sustenance, and future-orientation of communal practices of peasant and Indigenous lineage. On the other hand, it sought to create a powerful material assertion of communal presence amidst the unfolding struggles to maintain collective land rights.

Different roles, similar approach: Turning "participation" on its head

Our specific role in the Quiané project, where we were appointed as academic instructors, differed from our position in the Chamanga Cultural Center. However, our pursuit remained similar: to mobilize DesignBuild as a way to draw alliances with local struggles. Throughout the process, we sought to frame our collaboration with Quiané's coalition as a form of academic solidarity with their struggles and demands. In this sense, we like to think of "participation" in a way that differs from the more conventional way it is mobilized in design, where participatory approaches merely inform, consult, or placate those affected by a project—as represented by the middle tiers of Arnstein's ladder (1969). We try to distance ourselves from practices that, as described by Johnson (2011), devise "rituals" that "cultivate legitimacy for technocratic proposals [...] without altering norms and expectations of expertise that shape and influence decision making" (p. 463). Consequently, rather than asking a generically defined "community" what they "would like" in terms of design to improve *our project*—or legitimize it—we like to think about ways to embed ourselves in the localized processes of struggle that explicitly ask for our support in *their project*. In other words, we try to devise practices through which we can participate meaningfully in our collaborators' processes, and according to their demands.

Even if we were unable to engage in more sustained ways of on-site exchange and *convivencia* given our geographical distance from Quiané, we faced the project with a certain peace of mind given the decisions that *preceded* the design. The frame-work implied that we were acting as participants in a long-standing social and political process that was being advanced by a local grassroots coalition that requested our participation—and that had established forms of legitimacy within and accountability to the broader constituencies of the project. Throughout the design process, we sought ways to maintain constant communication and exchange with Quiané's coalition, keeping periodical feedback loops as the studio's design proposals advanced. This process was facilitated by CAMPO—who were embedded in and part of this longstanding mobilizing process. Consequently, the design process of each phase was discussed and oriented through on-site assemblies in which we participated online (Figure 6). Although the system was without a doubt limited, it stood on the basis of a project that had already been conceptualized, defined, and requested by the local coalition.

Figure 6: Project assembly in Quiané, November 2019.

Politicizing the design studio

In parallel, we sought to bring broader discussions about power structures to the table throughout the design process. Therefore, we held internal workshops with students aimed at discussing the political context and implications of our work. We were particularly interested in developing a contextual and historical understanding of Quiané's struggle and our involvement in it, while positioning both processes as part of a broader discussion related to class-, race-, and gender-based forms of oppression. First, we aimed to discuss how historical forms of hierarchization enabled our involvement in such a project. Second, we wanted to explore how our work—as an extension of and contribution to our local partners—might either help sustain or erode these structures. For this, through readings of authors such as Quijano (2000), Johnson (2011), and Tunstall (2013), we brought in the voices of scholars and activists who have discussed issues of coloniality, capitalism, patriarchy, and more generally, power. Setting them in dialogue with our own lived experiences and the broader frameworks of the project, the goal was to collectively develop an awareness of the socio-political implications of our work, and to enable participants to take conscious decisions on where to stand. In other words, we sought to understand the structural bases of inequality to in-

tentioally mobilize “the political agency of architecture” against them, which is crucial in contexts that have been so profoundly scarred by colonialism, according to authors such as Karim (2018, p. xxxv).

Throughout the discussions, we found that approaching such conversations in the design studio, which has traditionally posed and understood itself as a space primarily focused on “technical and practical” matters—or at most “aesthetic” ones—proved challenging. While students were eager to analyze contexts physically and design interventions accordingly, they struggled to discern the political trajectories, implications, and meanings materialized in environments and embedded in the processes that shape them. Their architectural and engineering training had biased them towards an apolitical reading of the socio-spatial in general, and the environmental design disciplines in particular. Meanwhile, discussing design and construction vis-à-vis the reflections of fields that are advocated to understanding social phenomena—such as sociology, anthropology, or political sciences—was crucial for positioning ourselves and our work critically. In this sense, it was imperative to learn from disciplines that have been more agile than architecture in recognizing their own colonial trajectories and biases, alongside their complicit role in perpetuating varied forms of oppression.

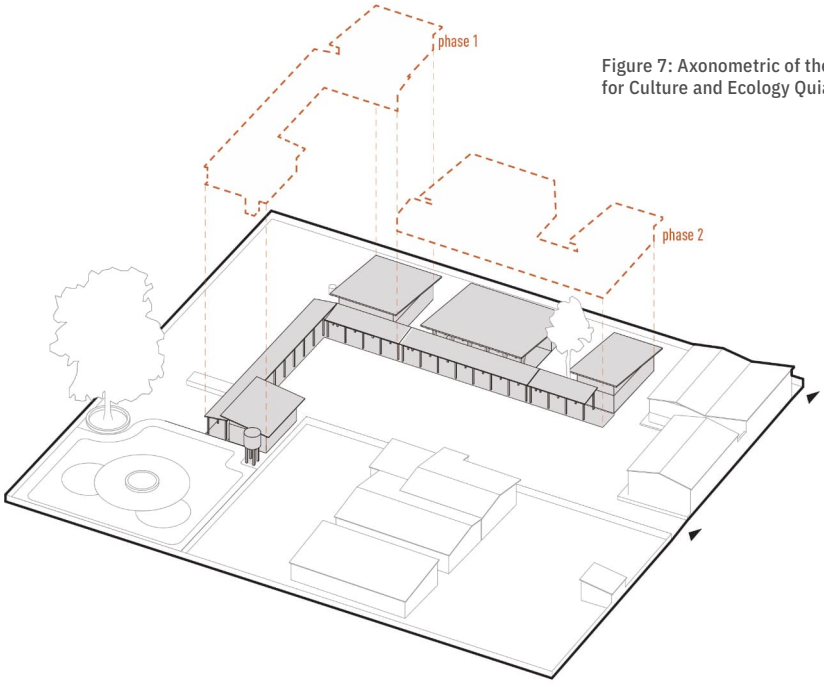

Figure 7: Axonometric of the Center for Culture and Ecology Quiané.

Figure 8 and 9: The kitchen as a "reinterpretation" of Quiané's vernacular kitchens, clad in reed.

Design is not neutral: resisting and reproducing the colonial

While we have argued so far that DesignBuild can contribute to grassroots struggles that challenge power structures, we also recognize the contradictions and colonial blind spots that permeate our practice and projects, despite their broader framework. In the Quiané project, for instance, the mere conception and name of the center simultaneously unites but also implicitly opposes notions of "culture" and "ecology," reproducing some of the Western "ontologies of separation" (Escobar, 2019, 2020) that lie at the root of colonial/modernity.

On a spatial level, the site's organization was also often conceptualized in somewhat binary terms of a "civic" or "cultural" area versus an "ecological" or "agricultural" area (Figure 7). Throughout the process, the design team thus inadvertently borrowed from and reproduced some of the constitutive orders of colonial space that pose culture and nature as distinct opposites (Porter, 2016, pp. 77–105). Meanwhile, the compositional and material choices of the center loosely allude to a sense of "modernization." The project's technical and aesthetic "reinterpretations of the vernacular" could be read as forms of technocratic optmism that animate narratives of development and its colonial entanglements (Figure 8 and 9).

More specifically, the studio structured the design on an orthogonal grid to accommodate standard wood sizes. While incorporating a modular system made construction times more efficient—to meet the requests of our partners—the deployment of the grid as the spatial matrix of the project mirrors the ways in which colonizers transformed the landscape as a means to appropriate and rationalize it, with profound racializing implications (Nemser, 2017). Despite asserting a form of communal presence as part of an inherently anticolonial

struggle, the center thus mobilized a spatial language of colonial resonances. Indeed, as neutral as it may seem, the grid has been discussed as the spatial articulation of the fundamental rationales of colonial/modernity (Escobar, 2016, 2019) and Eurocentric "ontologies of the city" (Durán Calisto, 2021). Rather than trying to conflate grid usage with the colonial nature of a project as a whole, we believe that its "automatic" and "naturalized" deployment in the Quiané project illustrates how colonial ontologies and rationales permeate our spatial imaginaries and design practices.

In that sense, we can see how the Quiané project, while serving anti-capitalist and anti-colonial grassroots agendas that resonate with broader struggles for the commons (Esteva, 2014; Federici, 2016; Federici & Linebaugh, 2019), it also internalized many rationales and logics that reproduced modern/colonial ontologies and spatial frameworks. While such contradictions and colonial blind spots were not explicit conflicts throughout the process, we recognize them as points of friction that deserve attention. Although these co-presences took place within an overall setup that limited the scope within which our internalized biases could influence the project since we were secondary participants of a sustained local mobilizing process, we believe that it is important to critically analyze the matrix of symbols and narratives that our project materialized, because architecture—as stated by Karim—always constructs a discourse (2018, p. xxxvi). Not trying to equate self-determination with political purity, we recognize that such ambivalences are also often present in the grassroots collectives we work with. After all, as Quijano (2000; 2010) argues, we all inhabit and are inhabited by the regimes of coloniality, even while we struggle against them.

For a politicized DesignBuild: final reflections

As DesignBuild gains notoriety as part of a broader trend in which spatial practice in contexts of material scarcity becomes increasingly "fashionable," we add to the growing number of voices that advocate for the politicization and critical assessment of our work. Throughout this piece, we have discussed the DesignBuild projects that we have participated in, namely in Chamanga and Quiané, to elucidate some of the ways in which structures of power and their contestations are central to the practice of this methodology, and of the environmental design disciplines. Within a context of "good intentions," we believe that it is important to acknowledge the forms in which we—as "DesignBuilders" particularly, but as a discipline and privileged sectors of society more extensively—benefit from, internalize, and reproduce rationales and practices that sustain systems of profound inequality, articulated in the broader diagrams of capitalism, patriarchy, and coloniality. Consequently, we have tried to understand projects in the larger historical context that enables them in order to "endow our work with political density" (Gutiérrez Aguilar, 2017). This, in turn, has allowed us to pursue a form of prac-

tice that deliberately takes sides with—and seeks to contribute to—situated organizations and processes that erode, rather than perpetuate, oppressive systems. Resonating with Johnson's (2011) proposal, we have pursued a form of DesignBuild that engages with social movements that are guided by values of mutuality, solidarity, and horizontalism. Contributing to their struggles, strongly rooted in the defiance of structural injustices, stands in direct opposition to design practices that are functional to euphemistically defined "poverty alleviation"—or hegemonically construed development measures (ibid, p. 469).

Through our own experiences, we have argued that the most crucial decisions to unfold practices that are system-challenging (Marcuse, 1976) take place in the processes that precede design and frame the rest of the undertaking. As discussed in the first section of this chapter, we opposed the idea of a women's center in Chamanga because it did not emerge from a specific demand by local women's groups. Instead, we redirected the DesignBuild effort towards the support of a longstanding process spearheaded by Opción Más—which, in turn, had profound implications for the disruption of race-, gender-, and class-based forms of oppression. At the same time, it moved the project from a position of "good intentions" and "empathy" to a trajectory of community leadership, accountability, and ownership (cf. Costanza-Chock, 2020), or what we have called *an architecture by demand,* borrowing from Rita Segato's formulations on militant anthropology.

Afterwards, we examined the reproduction of colonial spatial orders in the design of the Center for Culture and Ecology Quiané—as expressed by the use of the grid, a vaguely modernizing architectural grammar and an underlying binary division of culture and nature.

While mobilized to contribute to an inherently anticolonial and anticapitalist local struggle, we argue that these ambivalences illustrate the naturalized pervasiveness of colonial/modern rationales in Western(ized) environmental design practice, and DesignBuild in particular. It is our hope that the projects discussed here help demonstrate the need to limit the scope within which our own biases as structurally privileged practitioners and academics can influence projects in contexts and with peoples that occupy a completely different location from ours within the matrix of domination (cf. Collins, 1990; also in Costanza-Chock, 2020). As we have argued elsewhere, these differential positional relationships and asymmetries of power transcend North-South oversimplifications, as the interlocking systems of the colonial—and patriarchal—matrix of power (Quijano, 2000; 2010) operate at all scales and in all locales. In other words, our work in solidarity with social organizations in predominantly Afro-Ecuadorian Esmeraldas, or in our home-city Quito, is still traversed by our positionality and biases as middle-class, white-coded mestizo professionals.

Figure 10: Inauguration fiesta in the Center for Culture and Ecology, March 2019.

In our perspective, DesignBuild—and other forms of critical practice—are at their best when mobilized as secondary participants in—and contributions to—the preexisting processes and agendas of local grassroots organizations. Consequently, rather than exercising "participation" from its hegemonic position of designer-led protagonism, we have pursued ways to embed ourselves in situated processes that seek to disrupt oppressive systems. While it could be argued that such an approach might dismiss less organized, and therefore more "vulnerable" constituencies, we believe that our work is best placed—and our biases best kept in check—under the guidance of situated organizations who have established forms of leadership, representation, and accountability within these constituencies. As such, our aim is to pursue a practice that is based on principles of solidarity, justice, self-determination, emancipation, and mobilizing rather than those of charity, development, or altruistic paternalism. Through such an approach, we have sought to steer both the Chamanga and Quiané projects in ways that borrow from the rich trajectories of *Social Production of Habitat* and militant socio-spa-

tial academic practice in Mexico, Ecuador, and beyond.[13] Rather than an abandonment of DesignBuild's pedagogical goals, we see the politicization of its practice as a needed elucidation of—and deliberate positioning within—the contested tensions that traverse the methodology.

Looking forward, we believe that it is still a pending task to articulate our DesignBuild projects—and other methods of critical practice—with sustained forms of accompaniment to the grassroots mobilizations with which we act in solidarity. Embedding these projects within long-lasting collaboration processes remains a challenge amidst the precarity that also characterizes teaching and activist practice.

1 Despite our mixed heritage, we are perceived as "white" in the context of Ecuador—which in turn implies privileges.
2 "Collective subjects of transformation" are understood as political entities that arise from collectively faced struggles and whose purpose is to produce transformative actions. See Gutiérrez Aguilar, 2017.
3 With politizicing we refer to the act of endowing actions, memories, and events with historical density in order to understand them—and the power dynamics that surround them—in a contextual manner. See Gutiérrez Aguilar, 2013; Young, 2001.
4 Throughout her work, Segato has argued for an "anthropology by demand," whereby anthropologists make their methodological and disciplinary toolset available to the demands of movements and organizations. See, for example, Segato 2020. In the field of design, similar approaches would resonate with the work of people like Thomas Dutton, Wilson Herdoíza, and others. More recently, Sacha Costanza-Chock mobilized similar ideas as part of "design justice" (Costanza-Chock, 2020).
5 Pseudonym used.
6 The international workshop was led by Universitat Internacional de Catalunya (UIC) and included PUCE, the Royal Melbourne Institute of Technology, University of Tokyo, and University of Pennsylvania.
7 Translated as "coexistance" we refer to "convivencia" as our participation in the daily life of the collectives that we support. Through cohabiting space and sharing daily tasks, we seek to develop a sense of mutual trust and respect with our collaborators, while cultivating an embodied awareness of the contexts of our work.
8 With developmental narratives, we refer to an ideology which universalizes the Western way of living of the so-called "developed" countries, rendering other ways of life as inferior, thus legitimizing interventions into the lives of peoples. See Escobar, 2011; Ziai, 2017.
9 With white saviorism or "white savior complex" we refer to people who consider themselves as understanding other people's needs based on the racialized assumption that "they know best". See Cole, 2012.
10 With white feminism, we refer to the abstraction of gender struggles from its intersections with race and class, heavily present in middle-class white women who frame "women's struggles" through a generic and ahistorical perspective. See Arruzza et al., 2019; hooks, 1986.
11 Frente de Defensa por la Tierra stands for Front for the Defense of the Land. It is a collective that came together against the threat dispossession of Quiané's communally owned lands.
12 CAMPO stands, in Spanish, for Center of Support of Oaxaca's Popular Movement.
13 For Social Production of Habitat, see Ortiz Flores, 2004. In Quito, the work of TISDYC emphasized the potential of mobilizing academic socio-spatial practice in alliance with "organized sectors of society" (see Herdoiza, 1993).

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Part 2

Experiments and Construction

Javier Correa

The Open City

Architecture, Itineraries, and Fragments

The history of the "Open City" has been interpreted over the years as a pedagogical experience relating mainly to architecture and design. The origin of this project at the Architecture School at the Catholic University of Valparaíso in Chile can be categorized within the context of a group of teachers and students who brought in architecture outside the university to expand the borders of the discipline and its teaching. However, this article aims to give an account of a more complex program, one in which dimensions such as utopia, to live in a community or the interrelationship with poetry and art, are not practiced based on an educational imperative or as part of a methodology. Approaching this complexity allows the gathering of fragments of the history that gives rise to the Open City, which had—and has—an existence that could be thought of as independent of the educational project.

Fragment 1: Departure

A first fragment is found in 1952 when a group of architects who graduated from the Catholic University of Chile in Valparaíso shaped the Institute of Architecture of the Catholic University of Valparaíso, which is primarily dedicated to research. This was the outset of a pedagogical activity that would later evolve into professional teaching at the university's Faculty of Architecture, and which gave rise to what is today widely known as the "Valparaíso School" (EAV). The original group was made up of architects who had been trained by professors Alberto Cruz and Francisco Méndez. The Argentinian poet, Godofredo Iommi also influenced the group informally. Around the late 1940s, these two university professors had begun a revitalization of the teaching of architecture, heavily influenced by the cutting-edge European abstraction of the early 20th century and by the Bauhaus in Germany in particular. The transformation initiated by them and other professors such as Alberto Piwonka culminated in 1953 into a formal project with the visit by Josef Albers to the School of Architecture of the Catholic University of Santiago.

Figure 1: Original group of architects in Valparaíso, 1952.

However, initially, the influence of European and North American trend-setting movements was translated into the introduction of their architectural principles as well as also considering the experimental and collective work as a productive force and expression of interdisciplinary collaboration.

(Figure 1) The 1952 arrival of Cruz, Méndez, and the group of young, recently qualified architects to Valparaíso[1] and the subsequent founding of the Institute of Architecture marked a way of perceiving architecture as a collective process that immediately started to display its first formalizations in architectural projects. These projects include the chapel of Fundo Pajaritos (1952), the parish of Santa Clara (1952) the "Workers" Town of Achupallas (1954), and the Benedictine Monastery of Las Condes (1954–1960), which was the only project from those years that was realized. These projects, although developed under the responsibility of certain professors relied on the group's collaboration in order to tackle specific issues such as light, spatiality, and materiality. This meant the creation of an architectural project that did not ultimately bear the signature of any one, particular

architect, but rather of the institute as a whole. Furthermore, conceiving architecture in close relation to observation through design in the city of the practices and habits generated in the urban and private sphere made it possible for the discipline of architecture to enter a particularly experimental dimension where design and construction went hand in hand. In a speech delivered in 1959 to the attendees of the Latin American Conference of Schools and Faculties of Architecture (CLEFA), Alberto Cruz explained how the first project the group undertook at the Institute of Architecture was to demolish its walls in order to rebuild it again; hence:

> **"We carry it out through small things. To create and rebuild, we have a classroom built to see whether what is being shaped is accommodating to making a class. It is for no other purpose but to control our present time and school."**
> *(Iturriaga, Strabucchi, Correa 2014: 27)*

(Figure 2) This act of destroying and rebuilding spaces based on an in-depth analysis taking place in the institute building and later on at the faculty headquarters was undertaken on many occasions and was a constant feature throughout the history of the EAV. The photographic archives reveal brief and structural interventions in the classrooms for the purpose of celebrations, stage works, research, and examinations, among other things. The point Cruz makes when it comes to the act of renovating the building to re-appropriate its form and space exemplifies clearly both the strongly exploratory nature of the group and a way of approaching the relationship between the design of habitable space and its use. Subsequently this exemplified a large proportion of their work. On the one hand, they sought to critically review the discourse of modern architecture and, on the other, to specify its own position concerning modernity in the Chilean and Latin American context. This meant, as Fernando Pérez Oyarzún points out, the integration of both a theoretical proposal and teaching reform (Alfieri, 2020: IV). The institute's interventions were mirrored by that of the Architecture Institute of Tucumán, in Argentina, which operated between 1947 and 1955, and with whom the Valparaíso group maintained contact. Both groups were based on a radical attitude inspired by Le Corbusier. This approach lead them towards an architecture that, in the case of Valparaíso, came about by means of direct observation and the depiction of facts. This was in order to develop a methodology not based on theoretical or historical assumptions echoing modern European projects, but rather, by reflecting the utopian element of modernity to attune it to the local reality and remote location of Chile and Valparaíso. Thus, the first time the group started to operate and study its own approaches, there was a recognition of the historical and cultural distance of the

Figure 2: Pavilion at Latin American conference of schools and faculties of architecture, 1959.

local context far away from Europe. This realization did not result in a cultural critique of the international model of modernization, but rather supported a position that distanced itself from architectural rationalism and moved towards perspectives that led to an integration of elements of poetry and the visual arts.

Fragment 2: Poetic practices

EAV's position took into account European references, but distanced itself from rationalism, such as pictorial abstraction, symbolic poetry, surrealism, or DADA. This led the group towards integrating poetic and visual practices in its approach to architectural projects. Since the group's very beginnings, the figure of the Argentinian poet Godofredo Iommi—who came and settled in Chile towards the end of the 1940s—started having a strong influence on the group through the introduction of poetry from the late 19th and the early 20th century.[2] Iommi introduced poetic experiences he had developed in Argentina and Brazil during the Second World War. In these experiences, the journey and poetic acts were part of a way of performing poetry in the public spaces that distanced itself from the

written text, leaving room for improvisation and intervention. In this manner, poetry's association with reality sought to express itself through a work, whatever the scale, that became independent of whoever created it. This turn towards action introduces a new dimension in the group that approaches the field of architecture. As indicated by Alejandro Crispiani (Crispiani 2011: 211), this involved a vision that set up a reading of modernity and a practice of architecture that was direct. In other words, it involved producing a work and not just a theoretical approach. From that point, the words pronounced by Alberto Cruz in 1959 gained meaning—through poetic activity—towards producing "architectural events," both by the professors and the students. The constructive dimension taken on by architectural design was related to conceiving architecture as an eminently poetic phenomenon that ought to allow architecture a form of autonomy from its direct functionality. In other words, the "deeds" that the work produced—being no different from the usual deeds that occur in architectural space—were not ultimately focused on reinforcing functionality but on making it transcend functionality. This concerns a phenomenal conception of architecture that profoundly determined the group and that was to find its principal expression in the Open City. This was the architectural and poetry project undertaken since 1970 to the north of Valparaíso for which the EAV group is recognized to this day. In works such as *El Puente* (the Bridge), a wooden structure built in the early days which is no longer standing, with its zigzagging structure raised over the dunes, that manifested this ambivalence between form and function, or rather a function that is elevated to a kind of poetic phenomenon of architecture.

Iommi's influence on the group was, in turn, enhanced by the arrival of the Argentinian sculptor Claudio Girola, who, together with Tomás Maldonado, Alfredo Hlito, and Ennio Iommi, among others, had in the 1940s in Argentina revitalized the Concrete Invention Art movement. The group had ties with artists such as Max Bill and George Vantongerloo, as well as with the Escuela del Sur of Joaquin Torres García, which had made it possible to create a direct connection with the vanguard of abstract art. This fact is significant since it introduces to the group the notion of art totally separated from any figurative art, which directly influenced the teaching of architecture within the EAV, where Girola remained a professor until his death in 1994. This influence initially came from a formal re-reading of those movements and styles, which was then transferred to the architectural works and workshops of the architecture degree curriculum. Two direct references in this sense constituted the pictorial work of this period by Alberto Cruz, where it is possible to find traces of the paintings of Tomás Maldonado and Paul Klee, and the case of the painted façade of the Parish of Corral (1960) with its reference to Max Bill. Secondly, what they then attempted to gather from the artistic abstraction movements and transfer to teaching was the predominantly avant-garde and iconoclastic sense they developed for visual and formal autonomy concerning representation.

Thus, from the onset, the active presence of poetry and the visual arts (mainly sculpture and painting) in the activity of the Institute of Architecture functioned in a horizontal way within the teaching there. In addition it was a collaboration that quickly began to generate a solid theoretical and discursive cohesion that evolved into the idea of a "school." This was understood in relation to a particular way of thinking, as well as in the sense of developing not only a unique teaching but also a series of creative, theoretical, and discursive coordinates that occur within the school. In other words, in the Institute of Architecture there started to be a way of thinking and creating that resonated with a discourse. This meant that it became available as words and work based on doing. This productive activity, heavily influenced by a vision that granted poetry the aspect of a generative phenomenon of works, permeated the group and separated them decisively from the national context. It did not then involve adopting a series of references and blending them in an interdisciplinary way, but leading these to their own identity and time, which, as in any intellectual or creative movement, also started to produce a separation between an "us" and the "others" that in time ended up consolidating itself as new generations who were taking over the tradition that was initiated during those years.

Fragment 3: A contemplative gaze

At this point, it is necessary to specify that in the architectural projects and competitions in which the institute participated in these early years, there was still a more explicit reference to the arguments and formal repertoires of the international architecture of the time.[3] However, it is also possible to identify an attempt at formal purification, which in the textual discourse was expressed through an essentialism that attributed or granted architectural forms a significance and agency strongly assimilated to an ontological dimension (Crispiani: 244).[4] An example of this contemplative attitude can be discerned in the design and foundations of the Capilla del Fundo Pajaritos (1952), a white concrete rectangle with a central entrance and square floorplan, whose only illumination enters indirectly from the sky, lighting the space homogeneously and dematerializing the boundaries. The "Church of the Forms of Absence" (Cruz, 1954), as Alberto Cruz called it, differentiating it from the "churches of the forms of presence," thus marking a separation both formal and historical which, echoing Adolf Loos, sought to overcome the ornamentation, figuration, materiality, and the very foundation of the old and new cathedrals. Though the chapel was not built, it set in motion one of the first founding myths of an architectural process opposed to functionalism, which later would be widely deployed in the Open City project.

(Figure 3) Although this opposition to functionalism was not entirely accepted by the whole group, its criticism was directed towards the notion of progress present in architecture, which had forgotten the human foundations that made it necessary. This

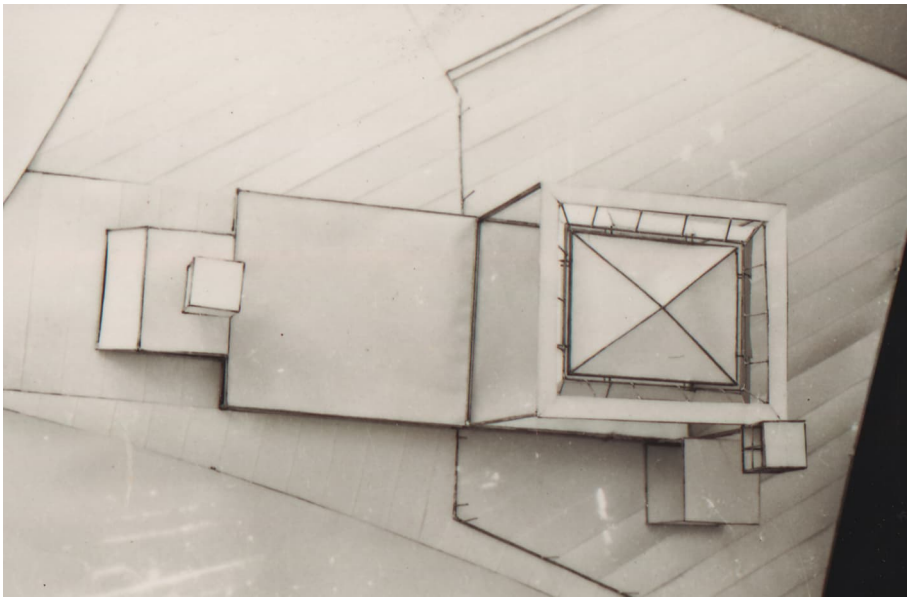

Figure 3: Model of Fundo Pajaritos chapel, 1952.

position reached its peak when, in 1972, the EAV presented an exhibition of its first twenty years in the National Museum of Fine Arts in Santiago. With the foundations of the school and the Open City displayed on 59 blackboards written out and drawn in white chalk, various works were exhibited, some realized and others not, demonstrating the journey the EAV had undertaken since its beginnings. The discourse, in turn, progressed to the theoretical or poetic evolution of the group. A sentence with particular relevance was: "We say NO to housing and YES to inhabiting," (AAVV, 1972) a fundamental manifesto rejecting architecture as a housing solution and affirming its poetic and ontological significance.[5] By this time, the school had already presented its first foundation as architecture generated with poetry, although this affirmation came after two fundamental experiences that will be discussed later: the Amereida journey and the founding of the Open City. Both constituted the expansion of communication possibilities between poetry and action towards codifying the poetic act on the one hand and, on the other, towards architecture as a habitable space devised and constructed on poetry and the development of a vision of the American continent. It could be said that these two experiences—one occurring in 1965 and the other still underway— allowed expansion in the field of architecture and the close relationship between design and construction that can still be identified to this day.

Fragment 4: The poetic action

The Amereida journey, undertaken by the group in 1965, along with Latin American and European poets, philosophers, and artists (Correa, Jolly, 2019)[6], represents a significant experience in the context of the relationship of architecture with poetry. However, it does not entail an academic or educational project but rather a response to the activities that Godofredo Iommi pursued in France between 1958 and 1963. It was during this period that strong ties with the Valparaíso group were maintained and even extended beyond Chile.[7] These years also corresponded with the displacement and personal experimentation that Iommi sought to deploy, first in collaboration with the Argentinian artist Carmelo Arden Quin, and later with the group "La Phalène." This included those who undertook the Amereida journey in 1965.

The plan behind Iommi's relocation was not only to come into contact with France's poets and intellectuals[8] but also to present and test a form of poetic action that, based on Lautréamont's entreaty that "poetry should be made by everyone, not by one person alone" (Lautréamont, 1998: 79). The idea was to take poetry to the squares, streets, and open spaces of cities and towns. Since his youth, and having tried to implement this in Valparaíso, Iommi had the idea of deploying poetry based on oral customs understood as an historical European legacy. The tradition of medieval minstrels and troubadours who travelled the towns singing stories resonated with him. The poetic activity he developed in France was based on displacement—"journey" as he called it— that provided a context where wandering allowed the context for activating poetry. In his first journeys, Iommi travelled alongside other poets and theater actors who, dressed up in outfits designed by the group's visual artists, recited poetry amid astonished spectators from rural villages. This initial format later varied to become one in which the poets themselves enhanced a poem among each other or together with the audience (Correa 2017).[9] This format was called Phalène, alluding to a butterfly that flies towards the light and burns itself. The collective improvisation then gave rise to the synchronic intervention of the artists. Thus, together with the Phalène, the sculptural and pictorial signs were created as forms of physically recording and marking what had occurred at that location (Mendez, 2015).[10]

Various elements stand out here that had great complexity in the Amereida journey and that subsequently also determined the architectural process of the Open City and the EAV. The first of these is the expansion of the poetic act to a meaning beyond that of the poet, that becomes public. The consequence of this was to put the notion of the author into question, which was disputed by the reality of a collective and anonymous work. The second element is its emergence since it concerns a *"hic et nunc"* action. The capacity of this action to be realized depends on the immediacy and risk of those causing it, and it therefore

Figure 4: “Phalène”. Poetic action, France, 1964.

permanently hovers on the edge of failure. A third element is the characteristic of an action that brings together the interdisciplinary and the unspecific in a single work, since in this, the disciplinary limits are surpassed once the work produced does not respond to a specific language or basis. It can be at once oral, visual, performative, etc. Lastly, a fourth element of the Phalène is its ephemeral nature. It is not made to last; the sign produced there is not intended to last either. It is transitory. Thus, a work that would later have this characteristic could be announced, but at present, it was not tied to it. (Figure 4)

Fragment 5: The journey

The Phalène experience directly inspired the Amereida journey project. In this, the above-mentioned elements described were also deployed. The journey commenced at the end of July 1965 from the Chilean city of Punta Arenas and headed northwards across the South American continent, through Argentina and Bolivia. Its objective was to combine the words America and Aeneid and to undertake a journey to discover the poetic sensibility of the American continent and to provide it with a new foun-dation: a poetic foundation. It involved a gesture that did not aim, in passing through the expanses of Patagonia and the Pampa, to found a po-

etic dwelling there. As the poet Michel Deguy indicated many years later: “They believed in light, transportable architecture, in the poetic expedition, in the yeast, in the mustard grain (small deci-sive transformations).” (Deguy, 1998: 35) Howe-ver, for what was later the Open City, undertaking this poetic journey through an almost impossible route allowed the rea-lization of a large number of poetic acts since they had no sense of a “departure,” but they fitted within what could be cal-led the “great departure,” which was the journey. In this way, the actions, signs, and other interventions carried out during the journey, although ephemeral, took on a different meaning that also involved architecture. Both in the logbook of the journey and in the notebooks of some of its participants[11] we find notes and descriptions of architectural thought about the continent, which is expressed as a need to be developed after the journey. Together with these notes, the photographs of the journey reveal an embryonic form of architectural design based on poetic action, which was later codified in the cross pollination of architecture with poetry. This form, during the journey, took up again with greater force the idea developed in the early years of the Institute of Architecture that architecture and, on a smaller scale, the sign, were generated from the intervention of many hands. The figure of a “circle” appears during the journey as a way of approaching or causing an act, a sign, or some intervention (AA.VV, 1986: 159).[12] (Figure 5)

Figure 5: Amereida journey. Chile-Argentina, 1965.

Fragment 6: From Amereida to Open City

The experience during the journey—although they were not able to reach their destination, which was the city of Santa Cruz de la Sierra, in Bolivia—made it possible to translate the poetic elements into a refined way of conceiving architecture as a process that also responded to a poetic sense. A few years later, in 1968, a group of professors purchased a site on a dune to the north of Valparaíso, between Punta de Piedra and Ritoque, and in March 1970, the Open City began (Browne, 1985).[13] François Fédier would later claim that the Open City was an extension of the Amereida journey, a way of "seeing if we can build it there."[14] However, a number of other arguments that had already developed during the previous years were involved in its realization. The first of these related to the community life that the group of teachers had experienced living together in a series of identical houses in Viña del Mar. There, they had experienced a way of life that intertwined family life with professional life and a strong community bond. This led to the need to unite life, work, and study in one place. That indicates the first utopian aspect of the decision to establish the Open City since it did not concern generating a space dedicated exclusively to architectural and artistic experimentation but opened up the possibility that it was also possible to live there. On the other hand, the gesture expresses a desire to form a community partially removed from city life and to create a different urban way of life. In the Open City this also took on the form of organizing the public dimension based on rules that were no longer deemed a hierarchy of roles or rational planning, but that were based on poetic acts and a spatial orientation not ordered according to street, garden, or façade. Rather they were based on the multidimensional relationship that each construction took on in the natural context. A second dimension in the Open City was having somewhere where architecture could be produced that did not respond to the rules of the professional world, the market and construction but that could be developed as a free art. A third argument related to the university reform that had taken place at the Catholic University of Valparaíso in 1967. During the process, the group has reached the conclusion that there was a need to establish:

> **"A real and concrete community made up of teachers, professors and students fighting relentlessly to establish in American lands a place where the freedom to study and openness towards one's own, without prejudice, dogmatism or chauvinism, is a reality."**
> *(Iommi, 1971:1)*

This need sought to extend architectural education beyond the university to an experience of a habitable architectural work. This was the manifestation of a de-

sire to evolve. There was a criticism at the outset of teaching based on the Beaux Arts model, but they rather took the Bauhaus workshops as its starting point, creating a model which extended the university experience beyond the classroom. However, it also directed the discipline towards the establishment of an American freedom of the profession, which linked architecture to a community of masters and scholars.

(Figure 6) Paradoxically, it was these elements—community life, works and study, freedom of architecture—which, over time, became associated with the Open City. As Crispiani indicates, to this day, it is not possible to assert that Amereida (the journey and later on the poem) gave America the epic poem that, according to the group, needed to erase its colonial past. However, it would then be "a failure that would be very successful, since it would lead, with its alternatives, to Open City" (Crispiani, 2011: 290). Indeed, the poetic proposal expressed in the poem published in 1967 with the homonymous title, Amereida, had repercussions mainly in the context of the school and less so within the local or worldwide cultural or literary sphere. This was above all, due to its impenetrability and revered nature to which only those initiated in the mysteries had access. Nevertheless, "the Open City was its bridge to the rest of culture" (Crispiani, 2011: 290).

Figure 6: Poetic circle at the foundation of Open city, Ritoque, 1971.

It could be said that in these actions shaping the Open City, understood to be the design and construction processes, there are various poetics at work. The Open City is, in this sense, inseparable from the discourses on their forms of becoming and being produced by themselves. However, a gesture throughout these poetics is that the dimension making this a place distinct from a field of experimentation is the fact that its constructions are immediately inhabited by people. This dimension may be a utopia or a mirage, as Iommi and Cruz once stated (Cruz, Iommi, 1983: 17–25), but it is inevitably subject to the dimension of life. Hence, although their first constructions were open public spaces, they included some living spaces to care for and maintain them.[15] This poetics of architecture concerning the specific life in a place as difficult to inhabit as a dune on the edge of the Pacific Ocean defines a relationship with the project, its materiality and construction that has, over the years, been a constant challenge for the community and particularly for families inhabiting the Open City. Here, the problem raised at the beginning of the EAV concerning the contrast between functionality and experimentation returns. Added to this is the "self-poetic" nature in which the various works were carried out; in other words, both the design and construction are dimensions emerging from the Open City. Only in the last ten years has an interesting creative collaboration been carried out together with the School of Architecture of Lausanne (EPFL) with the project titled *Pórtico de los huéspedes* (Guest Portico), which currently houses the Open City's public library. This was based on the analysis of Gunnar Asplund's chapel.

(Figure 7) At present, it is possible to see in the Open City a juxtaposition of works ranging from their beginnings to those still in the process of being built. The landscape is filled with ruins and traces of previous constructions that blend into the sand. The dunes dominate the landscape, with the works camouflaged between them. It is an image that contrasts with those of two decades ago when many structures were being built either by the inhabitants themselves or by groups of professors and students. Many of these early works have undergone multiple transformations, improvements, and renovations due to the climate and improved material conditions, but mainly because they are, as Mary Ann Steane points out, conceived as "open-end" works. This means that they are never finished being built but are also never finished being understood (Steane, 2020: 192).

Although this experience of constant change today involves using durable materials such as concrete, in this effort to create architecture free from economic pressures, the use of self-building—a methodology otherwise widespread in the 1970s—has also meant having to resort to materials that are less durable but more economical. That said, this ephemeral condition of the materials is in keeping with the poetics of Phalène. The Open City constructions also possess this ephemeral character. Many structures have disappeared over time, erased by the

Figure 7: Children at Open City in the 1980s.

sea salt, the wind, and the sand. This condition has been read as poetic as it introduces the notion of knowledge that is not cumulative or fixed but always returns to an initial state, a "not knowing." This is relevant to architectural practice as it introduces two variables: temporal and epistemological. Temporal because the work constructed undergoes its decline over a shorter time period than the duration associated with a work of architecture. Even architecture can vanish. It is epistemological, because knowledge is not fixed in a theoretical model, but rather there is a rejection of formulating models that are put into practice from various standpoints. Poetics prevents the emergence of styles, even though the Open City is also recognizable as a style.

Nevertheless, a technological dimension has also been present in each built construction, which can be identified as a form of knowledge. This relates to the aesthetic and technical exploitation of materials commonly used there (predominantly wood and brick) that, as Massimo Alfieri points out, the Open City "never forgets construction technologies; on the contrary, it is usually possible to find oneself in the presence of original technological applications, without them being an end in themselves." (Alfieri, 2000: 41) This way of approaching technology has been described by them as being "low tech, high imagination" (Eyquem, 2014),[16] which, beyond describing a decontextualized way of constructing, reveals a "way of doing" deeply rooted in material possibilities and the direct experience of the geographical and climatic context in which the Open City is located.

The ideal of a practice based on the context and the non-repetition of formulas also provided a basis for developing a way of designing and building based on collective work. Indeed, the figure of the "circle," previously explored in the Phalène and the Amereida journey, was embodied from the outset in the methodology in which most of the constructions were developed. In general, this took the form of a group of architects, artists, poets, and the families themselves, specially through the impulse and agency of women,[17] who approached the works collectively in what they called "workshops." In these workshops, the ideal of bringing the inhabitants together was put into practice. The community made assemblies called "agoras" in which a new project was decided unanimously. The agoras were the starting point for constructing houses (hostels), workshops, and communal spaces (such as cemeteries, squares, gardens, and theaters). However, the project broke with the logic of the principal or client, allowing a cancellation of the contractual outlines and a move towards a relationship in which the client was usually part of the team that designed and constructed.

There is a dimension here that entrenched the idea of architecture without an author, enhanced with the clear notion that constructions, especially those for living in, were open-ended works. In the face of this changeability, the question

arises on the absence of a final project and on the definition that should be given to architecture as a collage or palimpsest. It is indeed possible to see the sequential development of a standard architectural project in very few of the works that are archived. In this respect, Alfieri specifies that this is, in fact, due to the work in the round, where what passes from hand to hand is not "a design or a fragment of project, but rather a segment of work that is continued and integrated into the work" (Alfieri, 2000: 65). Notwithstanding that this indication might provide clues as to the integrated nature of the projects, the absence of projects surrounding the knowledge of constructions developed in the Open City is not due to a lack of documents; rather, it has been due to an insufficient archiving of such works.

In recent decades this has been resolved in the archive at the headquarters of the EAV, in the Open City library, and in other personal archives of some of the architects who were, or are, members of the community. The documentation that has now come to light through new research has provided a clearer idea of the design, construction, and programmatic developments of the existing and demolished constructions. These documents do not refute the collective and processual manner of the projects, which doubtlessly constitute one of the strong points of how the Open City devised the way of inhabiting the land, but rather allow the detailed identification of the sequence by which these works have taken shape. Another relevant testimony was provided by the inhabitants themselves, who had first-hand knowledge of the stages and transformations of the spaces they inhabited. (Figure 8)

Figure 8: Water towers (destroyed) circa 1980.

Figure 9: Performance-intervention *"El cuerpo ausente"* by Victoria Jolly, 2023.

Final fragment: From the present

During the last decade, with the passing away of the first founding generation of the Institute of Architecture and the EAV, the Open City has moved on towards a period of internal transformations in relation to the EAV but also with the wider world. The link with the EAV continues, with some students participating in the workshop as part of their curriculum. Every Wednesday the students play sports in the dunes and the field, also known as the "meadow." The relationship does not have the same intensity as it had between the 1970s and 1990s when most of the works were built. Those years coincide with the period of the military dictatorship, during which the EAV and the Open City were disconnected from any form of political commitment, isolating and protecting themselves in a kind of "voluntary confinement," as indicated by Ana María León (León, 2016: 80-99). A radical option that resulted in isolation from the Chilean cultural world and ended up producing a kind of intellectual solipsism removed from the events and the porosity of practice and teaching. This isolation has been dissolved along with certain international

exhibitions[18] and actions by the Open City itself–such as those currently being carried out by the artistic collective Punto Espora. It has made it possible to approach this with fewer judgements to know its inner workings, contradictions, and exclusions. It is a process that is underway and that has made it possible for disciplines, such as the visual arts, music, and performance to return. This renews a space and contributes to re-examining the poetic expressions that gave rise to it and that allow "an unknown" to be built. The sound of the massive waves of the Pacific Ocean and the silence of the dunes create a scene similar to that of the beginnings of the Open City. However, the industrial saturation of the nearby area has ended up returning this to the condition of an island amid the environmental catastrophe. In the future this new condition will determine how the inhabitants of the Open City will consider their permanence there. This will also depend on how much the relationship between tradition and renewal can be resolved in a context in which the initial adventure has ceased to be the connection that galvanized professors, students, and inhabitants. (Figure 9)

1 Among them were: Arturo Baeza, Jaime Bellalta, Fabio Cruz, Miguel Eyquem, and José Vial.

2 This influence, above all, focused on the figures of Rimbaud, Lautréamont, and other French symbolist poets, as well as on poets of the 20th century such as Apollinaire, Breton, and Huidobro.

3 Above all, as mentioned previously, the vocabulary of Le Corbusier.

4 In various studies and accounts concerning the EAV, the influence of Martin Heidegger's philosophy appears decisive for the group. That is furthermore ascertainable due to the presence in the 1950s of the philosopher Ernesto Grassi and later, in the 1960s, of François Fédier, both direct disciples of the German philosopher.

5 Reference to the verse: "Full of merits, but poetically man inhabits this earth," by the poet Friedrich Hölderlin is made evident in this phrase. This verse is, in turn, echoed in the essay by Martin Heidegger Hölderlin and the essence of poetry. This involves a reference that also specifies the bibliographical corpus of the EAV.

6 The team who travelled included: Alberto Cruz, Fabio Cruz, Jonathan Boulting, Michel Deguy, François Fédier, Claudio Girola, Godofredo Iommi, Jorge Pérez-Román, Edison Simons, and Henri Tronquoy.

7 The Italian philosopher Ernesto Grassi, who visited Chile as a professor in the 1950s and experienced the Valparaíso School first-hand, played a central role in the influence that Iommi and the group had on the school. They even considered taking all members of the Institute of Architecture to France and develop the project there. However, aside from Iommi, in the end, only Francisco Méndez and Miguel Eyquem relocated to France for a number of years. Claudio Girola also frequently visited France during this period.

8 Iommi arrived in Paris with his family after almost a year spent between Madrid and Munich. In Munich, he came into contact with Martin Heidegger through the French philosophers Jean Beaufret and François Fédier. As already mentioned, the latter would go on to take part in the Amereida journey and later in the Open City.

9 The poet Michel Deguy also describes the action based on a game of painted cards that were passed from person to person and, on visual contact, a word was requested, which would then constitute a poem with the sum and combination of all the words.

10 According to Francisco Méndez, a participant in Phalène, and according to the archives, the first person to have reacted to the provocation of making a sign, the first of which consisted of placing a white stone above a plum tree.

11 The logbook of the journey was published in 1986 entitled Amereida II, published by the EVA itself, while Alberto Cruz's diary is preserved in the Fundación Alberto Cruz Covarrubias in Santiago. There are also notes by Godofredo Iommi and the diary of François Fédier, preserved in the Fondo Iommi-Amunátegui of the José Vial-Armstrong Archive of the School of Architecture and Design of the Catholic University of Valparaíso.

12 In this respect, in the first entry of the journey's logbook, the rules of the poetic game are indicated, which had to be given for the journey to be a success: No judgements, Freedom to "do," obedience to what happens to the act, transgressions.

13 Towards the end of the 1960s, the group already consisted of thirty people, including professors and external sympathisers. That was a clear push for the purchase of the land, an action that was nevertheless not supported by all of the community. For a more detailed description of this moment, see also, the document *Agora del 7 de enero de 1971. Acto de apertura de los terrenos*, published by the group.
Available at: https://tinyurl.com/4fa5fuvj

14 This statement is part of the testimony submitted by the philosopher for the documentary Amereida: *solo las huellas descubren el mar*, cited in note 14.

15 These living spaces, which later became houses, were called "vestal," in allusion to the Roman goddess of the home. The first vestal would have been the one looking after the Tronquoy Agora, which no longer exists.

16 Interview with the architect Miguel Eyquem. November 2014 author's records. Projects such as the "Hospedería del Errante," the "Casa de los nombres," or the "Torres de agua" are clear examples of this attitude to technology.

17 The recent exhibition "El cuerpo ausente," by Victoria Jolly, exposes the role of women in the construction and communitarian development of Open City. A participation that has been ignored by historiography.
See also: https://tinyurl.com/mwsdcncm

18 One of the most relevants was the participation in Documenta 14, 2017. Athens and Kassel.

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Interview

Eyquem, Miguel. 2014. Interview by author, November 2014

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Architectures of *Umzabalazo* (Protest)

Black Spatial Expression and Resistance Through Educational Architectural Student Projects in South Africa

> "True decolonization will only be achieved when the spatial organization of the post-colonial city has developed a "humanist consciousness," where the thoughts and actions of the everyday black masses are given space and power to thrive; where these masses (themselves) are agents of change."
> *(Kipfer, 2007).*

The "fallist"[1] era—educational reform, memory, and decolonization

South African architecture and built environment education has been confronted over the past five years with questions around its colonial and untransformed nature, in speaking to the identities, cultures, and needs of the predominantly black African population of the country. 2015 saw the birth of a student-led movement called #FeesMustFall (FMF) where university students across South Africa (SA) led protests that were fighting for the "fall" of fees as a requirement to access higher education (Mazibuko, 2020). The reduction of fees, although at the forefront, was however not the only element that students called for to "fall."

> "While the #FeesMustFall protests were aimed at reversing a university decision to raise fees, they were also an expression of much deeper tensions within South African academic and social institutions."
> *(Liphosa and Dennis, 2015: 50)*

Monuments of colonial history such as statues, symbols, and architectural structures that represent or are named after former colonial masters (such as Cecil John Rhodes) were amongst the things the movement called for to "fall" (specifically by the #RhodesMustFall Movement in 2015 at the University of Cape Town), along with western, Eurocentric curriculums and approaches to teaching, as part of a complete transformation and decolonization of universities in South Africa and their systems (Mazibuko, 2020). The concept of "fallism" in South Africa is not new to this period as it stems from multiple historic versions of black consciousness movements that occurred during the apartheid era. South Africa went through multiple political movements that were formed to fight against the apartheid regime that discriminated against people of color. Black, (student led) movements such as the Black Consciousness Movement (BCM) and the South African Students Organization (SASO) raised the political consciousness of many students and led to the 1976, June 16th student uprising that culminated in almost 10,000 high school students from Soweto (South-Western Townships) in Johannesburg protesting against the use of Afrikaans as a primary medium of instruction in schools. This was one the first major moments in South Africa's history where black students began mobilizing themselves against institutionalized race-based discrimination, that the 2015 #RhodesMustFall movement built on almost 40 years later.

The history of architectural education on the African continent has a long-standing struggle to break free from the chains of western, Eurocentric roots of its content and approach to design within African postcolonial cities. Wits University, as a leading institution in South Africa and the African continent at large, has for decades been at the center of conversations/debates, ideas, and efforts on how to address the constantly transforming nature of the Johannesburg cityscape in which it is located (Liphosa and Dennis, 2015). However, the institution has continuously struggled to manage its socio-economic and spatial positionality in South Africa's post-democratic era, to adequately respond to its now majority black student and staff demographic, and (spatially) open up to the rest of the "black dominated" Johannesburg inner-city space, where it is situated.

> **"The university's response to the democratization of the city, in terms of access and movement, reflect an ideological position characterized by lingering apartheid anxieties. That is, as the city has become more spatially democratic: legally and more accessible by black and poor citizens, the university has become more closed, financially, and physically inaccessible."**
> *(Liphosa and Dennis, 2015: 63)*

Salama (2009) highlights the (continuous) ever-widening gap between what students in architectural education encounter in their daily experiences (in South Africa's case, black socio-economic and spatial exclusion) and how architecture pedagogy effectively responds to these experiences in institutions of higher learning, suggesting a great need to embark on educational reform.

> **"Schools of Architecture (then) need to define a new code of professional ethics. The teaching and learning processes need to enhance the necessary social and scientific skills to cope with these crises. Students must be free to develop the knowledge, design skill and strategies for intervention needed to cope with ecological and environ-mental degradation within the context of social deprivation and a democratic deficit."**
> *(Salama, 2009: 16)*

The issue of a need for architectural education reform in South Africa is not a new one and can be dated back many decades. Through his work on educational experiments and research in Nigeria and South Africa, Julian Beinart, an architecture lecturer at Wits University in the early 1960s, pointed out some of the limited perspectives of so-called modern architecture on the African continent. He argued that there was a lack of critical questions of what an "African architecture" or "architectural African personality" is and should look like (Levin, 2016: 6). His work documented the façade wall paintings of Western Native Township houses in Johannesburg, created by its black residents and linked these practices to the contemporaneous architectural practices of documenting the lives of black people in South Africa (ibid). Beinart's work aimed "to reconstitute students' imagination, so that they could experience and respond to the richness of their urban environments more fully than colonial precepts would allow" (Levin, 2016: 22).

This chapter fast forwards to the #FeesMustFall (FMF) era in 2016 in South Africa, 22 years after the country's political liberation from the apartheid regime, to discuss the work of an architecture, planning, and urban design student collective called "BlackStudio" from the University of the Witwatersrand (WITS) who conceptualized and conducted various student-led initiatives that were in line with efforts to decolonize[2] architecture and planning education in the School of Architecture and Planning at WITS. The work of BlackStudio will constitute the central part of the discussion and demonstrate how the student-led studio used multiple educational programs and initiatives to transform approaches to architecture and planning education at Wits University. This included a lecture series on African

architecture and urbanism, a ten-day Winter School program and community immersion project, as well as building a temporary (black) settlement installation in an art gallery in the city, as part of their efforts towards making pedagogy in the school reflect the social environments and lived experiences of where they come from as black students.

"Decolonize the mind—secure the base" [3] —The emergence of BlackStudio

2016 saw the height of the national FMF protest movement in SA, that started in March 2015 with the #RhodesMustFall movement at the University of Cape Town (UCT), a protest against a statue of the notorious colonialist Cecil John Rhodes on the university's campus (Liphosa and Dennis, 2015: 49). Although the protests emanated from the statue itself, the movement grew beyond this towards a greater objective of decolonizing UCT and other higher education institutions in South Africa. The protest movements did not end at UCT and spread to other universities in South Africa, with a stronger focus on protest action against high university fees and other barriers of entry that predominately black low-income students face in accessing university education, as well as decolonizing university teaching methods and curriculum to reflect the lived experiences of the country's black masses. Other universities and technikons, such as Tshwane University of Technology (TUT), Durban University of Technology (DUT), and the University of Johannesburg (UJ) joined the protests. However it was at the University of the Witwatersrand (WITS) in Johannesburg that the largest impact was made and where the most media attention was centered locally and globally.

BlackStudio began in 2015, around the time of the initial #RhodesMustFall movement at UCT, as a postgraduate student collective formed by students from the School of Architecture and Planning at WITS University. It was motivated by similar feelings of exclusion and alienation that black students in the school felt to those at UCT around black history, identity, and experiences not being reflected or represented in the curriculum, spaces, and monuments within the university. The BlackStudio collective grew from a three-person group in 2015 to comprise of eight post-graduate students (3 architects, 2 urban designers and 3 urban planners) and over 20 undergraduate students in both planning and architecture by the end of 2016. All these students played a role in running the collective's initiatives and advocating for a move towards decolonial methods to teaching and learning within the school, in both architecture and urban planning disciplines.

BlackStudio was motivated by black consciousness and the aspiration for black youth in South Africa to move past living in survival mode, to rather thrive in the spaces they occupy, learn, and work in. Members of the collective realized that the present could become an epoch in which the dreams of past heroes of the black

struggle such as Malcom X, Martin Luther King, Steve Biko, and Nelson Mandela for a racially and socially just society, especially within an African university, can materialize. While recognizing how South Africa's colonial and apartheid past had left an indelible mark on the form and function of settlements across the country, the collective did not assume an apathetic attitude but rather a progressive and productive spirit to foster change not only in the WITS School of Architecture and Planning but also in the South African built environment profession at large.

All the students in the collective were of black African ethnicities originating from South Africa and other African countries such as Eswatini, Namibia, Zimbabwe, Kenya, and South Sudan. Within the South African context, the term "black" speaks to racial identities that are non-White i.e., African, Indian, Asian, and Coloured (mixed race). BlackStudio however used this term as a tool to unite all identities that are underrepresented within socio-economic and institutional spaces of power, ownership, and influence for purposes of deconstructing institutional whiteness, including black women, queer identities, and cross-border migrants. The students in the collective had shared feelings of neglect and lack of belonging within the school regarding their lived experiences, languages, and understanding of space as black locals and African migrants, not being well reflected in the university curriculum and literature being taught, as well as in the choices of project sites and themes that they were given to investigate. Henceforth, the decolonization agenda was closely tied to the aims of BlackStudio, as inequality, hegemony, and privilege continued to be present and permeate educational institutions in post-colonial and post-apartheid South Africa, including at the WITS School of Architecture and Planning. The students realized however that these issues transcended the boundaries of the School of Architecture and Planning at WITS University in which the collective began, as they are omnipresent in various spaces throughout South Africa. The collective's reach therefore moved beyond that of the university and began engaging with the public.

BlackStudio realized the need for students to be exposed to the realities of black townships and to integrate this into their university education, to fully question the current western ideals of the university curriculum and to redefine some of the principles of architecture, planning, and design to be relevant and applicable to everyday black African experiences. This need gave birth to various initiatives that the collective implemented including: a Winter School (community immersion) program in a black township called Tembisa, a talk series discussing ideas around African architecture and urbanism, and a self-built 1:1 exhibition prototype of an informal settlement, representing the black experience, identity politics, and cultural practice. What made these initiatives unique in the WITS School of Architecture and Planning were that they were primarily student led

and brought together ideas of race politics, culture, and identity with regard to architecture, planning, and design, in ways that the school had not done before. Students took the initiative to seek knowledge about themselves and the neighborhoods they come from and apply it into their architecture and planning education, outside of the programs and curriculum of the university. These initiatives were the first of their kind within the WITS School of Architecture and Planning and set a precedent for how student-led, experiential-based learning can be introduced into the university's curriculum.

Defining blackness, black space and (re)imagining its future

> **"To be Black is to be stuck at the foot of a wall with no doors, thinking nonetheless that everything will open up in the end [...] The fundamental meanings of Blackness and race have always been existential."** *(Mbembe, 2017: 151/52)*

Mbembe (2017) discusses the concept of Blackness from an identity lens that continues to be defined and confined by historic (colonial) underpinnings, which black people continue to find themselves "stuck" in, as contextualized by experiences of exploitation, conquest, and oppression within the modern world, particularly in the African continent, as well as in other global north black (diasporic) communities. Simone (2004) however discusses the mobile, flexible/non rigid nature of black space in post-colonial cities from a spatial/infrastructural lens, and how Africans have devised adaptive practices to occupy and co-exist in cosmopolitan cities like Johannesburg. The two are different approaches but essentially point out that blackness, both in terms of identity and space, is much more complex, fluid, and dynamic than what its colonial historic underpinnings seem to dictate. According to Simone (2004), the idea of (black) African urban space is how it is characterized by aspects of mobility, flexibility, and non-rigidity in terms of how its occupants inhabit and utilize it. A key aspect to how black urban space operates lies in its non-linearity, complexity, and unpredictability, as well as in the "ability of its residents to engage in complex combinations of objects, spaces, persons, and practices." (Simone, 2004: 407).

During the pre-colonial period, the composition of African space validated itself through personal and humanist values (Lloyd, 2003). Social hierarchy in African space was embedded in culture of community and collective ownership of space rather than the individual ownership of land and alienation of the other that post-colonial cities have developed. The determinant of pre-colonial African spatial form was therefore based on the relationship humans had with physical space

(Zimmerman, 1999). Simone (2004) argues that African cities largely reject the conventional, linear forms of urban life, which are primarily based on individualism and the social division of labor (as seen in global north cities), but rather consist of a complex system of diverse activities that manifest through a range of flexibly configured landscapes. African cities have a history of racial discrimination and segregation that occurred during colonization and apartheid, where indigenous (largely black) populations were enslaved and removed from their native land by European colonist nations such as Great Britain, Holland, Germany, Portugal, and France. Since the early 20th century, the majority of African countries have achieved independence from colonial/apartheid rule and have adopted a democratic governance system, with South Africa being amongst the last to gain democratic freedom in 1994. African countries are however still faced with various urban and social ills such as growing population sizes and high levels of inequality and exclusion.

Despite the liberation of black Africans and their attaining democratic rights to freely vote and access spaces in the city, there is a still a huge gap between the rich and the poor in South Africa, which is largely based on the spatial configuration of cities and the limited freedom to access and use of spaces in the city by the black urban poor population to develop themselves socio-economically. Coupled with this, the university and higher education system and curriculum also remain entrenched in western knowledge structures and approaches to education that are mostly foreign and alienating to the backgrounds that most of the black students attending these universities come from (Reddy, 2004). Calls for the decolonization of institutional knowledge, systems, and spaces have hence grown since 2015, during the 20 years since the country's democracy was established. It is in this context that the formation of BlackStudio at Wits University is based, as a response to the experiences of black students in the School of Architecture and Planning who were frustrated by the untransformed nature of the university's curriculum content that didn't reflect their lived experiences and the wide range of spatial issues from the (black) spaces in which they come from.

Fundamental to BlackStudio's objectives was to illustrate how architecture and urban design can be put to work, to create an environment where black people feel safe, welcome, and essential to the running and the contribution of knowledge in the WITS School of Architecture and Planning. BlackStudio conducted a series of talks with some of South Africa's prominent academics, thought leaders, and practitioners in architecture, planning, design and urban politics/governance that sought to build dialogue around contemporary issues on the transformation and decolonization of African spaces and institutions. The collective hosted six successful talks at the WITS School of Architecture

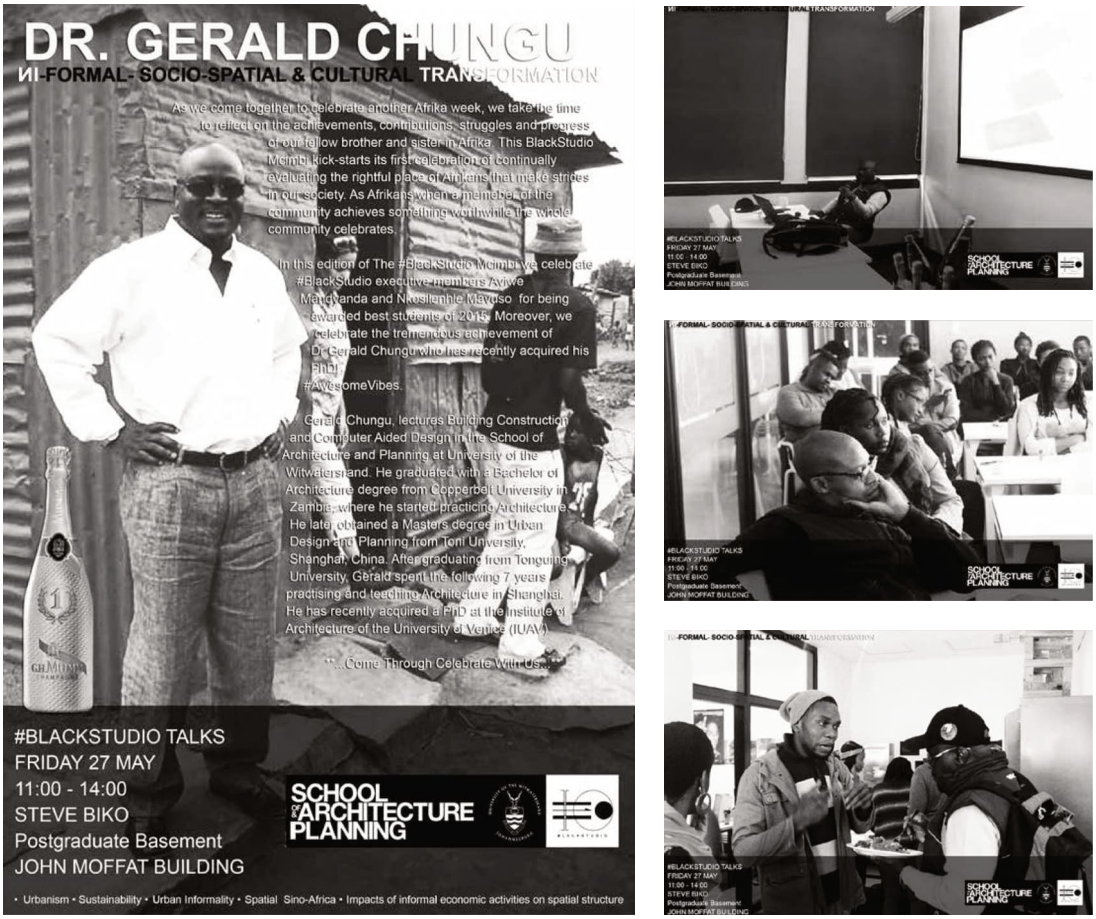

Figure 1: BlackStudio talk with the late Dr Gerald Chungu held at the WITS School of Architecture and Planning in May 2016, on informal socio-spatial and cutural transformation in Zambia. The talk was organized by the BlackStudio student collective and attended by both undergraduate and postgraduate students from the school as a celebration of Dr Chungu's PhD qualification.

and Planning John Moffat building in 2016 (see Figure 1). The subject matter of the lectures ranged from spatial epistemologies, the resistance of [In]formality and land occupation, to the violence of African borders, all presented by black senior lecturers and professors at the school, such as Dr Mpho Matsipa, (the late) Dr Gerald Chungu, Professor Mfaniseni Sihlongonyane, and Nqobile Malaza.

The talks were anchored in the desire to expose students at the WITS School of Architecture and Planning, as well as the public, to the academic, theoretical, and research perspectives relevant to architecture and urban spaces in the Afri-

can context. As shown in Figure 1, the talks provided students and all others who attended with the theoretical underpinnings which allow black spatial explorations to be guided both by theory, practice, and lived experience. Through these talks, BlackStudio developed a network of upcoming and established black academics and spatial practitioners to create a platform for engagement that aimed to bridge the gap between theory and practice as well as mentorship to young aspiring spatial practitioners. The talks encouraged and equipped black students to have conversations with each other about issues that are of interest to them and begin a journey of exploration, investigation, and critical analysis of black spaces in their marginalized locations. The design education work undertaken by BlackStudio contributed to knowledge creation at the Wits School of Architecture and Planning. Ideas were disseminated through research and design in under-researched, marginalized, and pariah African spaces (those being townships, informal settlements, and rural transitional areas).

Entering the land of Promise?—BlackStudio's community immersion into Tembisa township

In July 2016, BlackStudio engaged in a community immersion process in a black township called Tembisa, situated to the north of the East Rand of Johannesburg, as part of their Winter School program with student participants of Wits University's School of Architecture and Planning. The word "Tembisa" is a Nguni[4] name meaning "promise" or "hope." The township, with an estimated population of 463,000 people living in the area, was established in 1957 when black people were resettled from multiple township areas in the south and east of Johannesburg. The township was not historically allowed to create employment centers within its area, so almost all its residents commute daily to their employment destinations in places around the Gauteng City Region. The positioning of Tembisa in a central location between the Gauteng Province's three large city centers (Johannesburg, Tshwane, and Midrand) rendered it a strategic location for redevelopment and re-imagining. Tembisa is the second largest township in SA's Gauteng province within an area of approximately 42 square kilometers, with relatively high population density and relatively high employment rates of 46% and 44% respectively, compared to other townships in South Africa (Rakabe, 2016).

Approximately 72% of people in Tembisa live in formal dwellings compared to other townships of a similar size, such as Diepsloot in northern Johannesburg where over 60% live in informal shack buildings (ibid). As you enter the township (as shown in Figure 2) you are immediately met with bustling informal activities along the township's main arterial, high traffic roads, high streets, taxi ranks, and shopping malls, with rows of street trading markets and street vendors selling fruit and vegetables, groceries, secondhand clothing, and household goods as well as motor vehicle repair services and spare parts (ibid).

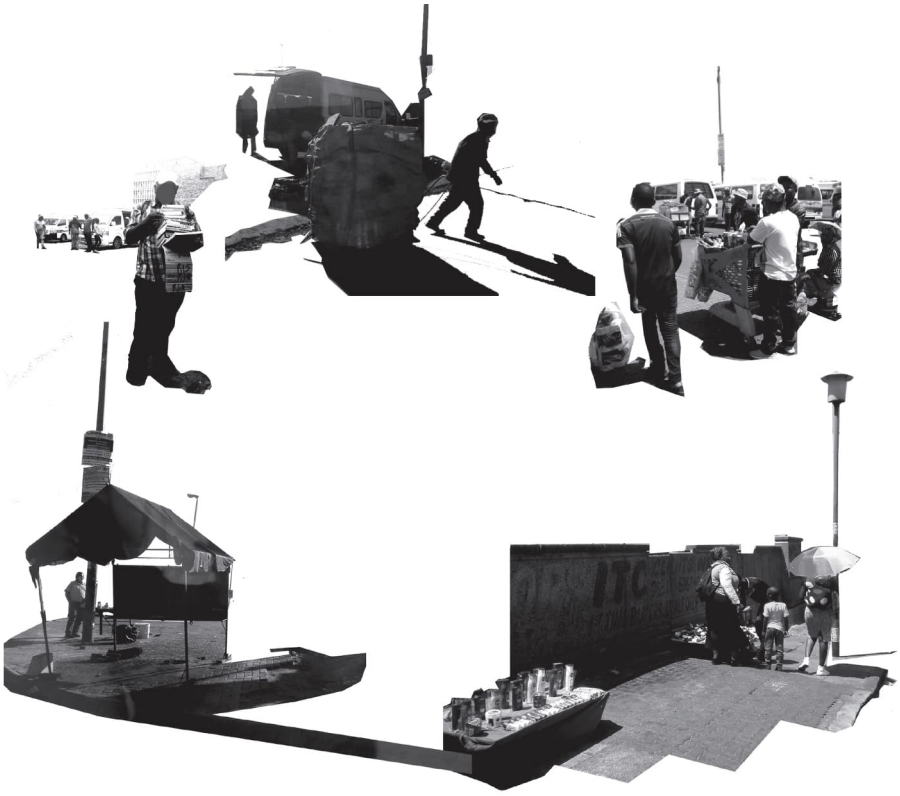

Figure 2: Economic activities, mobilities, and typologies of trading, waste picking, and transportation found as you enter the vibrant streets of Tembisa township.

The Winter School project took place in the form of a 10-day program where 30 undergraduate students from the Wits Architecture and Urban Planning programs teamed up in groups to investigate ideas around decolonial approaches to architecture, planning, and urban design in Johannesburg's black townships. The group of 30 students first undertook a two-day teaching/discussion workshop session where they discussed and debated ideas around African architecture and urbanism and the various languages and typologies found particularly in black townships. This was followed by a one-day site emersion exercise, where the students took an hour-long public train (known as Metro Rail) from the Johannesburg Central Business District Metropolitan Transport Station (Johannesburg Park Station) to Tembisa township.

This was a different approach and experience for the students, that differed from how WITS University normally conducts project site visits, by hiring a private bus/coach taking students directly from campus to the site and back. This meant that for the first time these students were given the opportunity to experience how the predominantly black low-income commuters of the city travel using the public rail system and experience first-hand the real difficulties (such as overcrowding, train delays, and crime) of public transit the public experience daily. Upon arriving at the Tembisa township by train, the students immediately took to the streets and spoke to Tembisa community members on the streets about their economic practices (e.g., street trading, car fixing/washing, meat butchering etc.), ways of living and sharing space (e.g., men's migrant worker hostels) and the different public spaces and community development facilities (e.g. Parks and Waste Recycling Centers) in the township, in order to understand the culture these communities are built on.

The street immersion and interviews were followed by two meetings and discussions with the township's community ward councilor who briefly spoke to the students about the work they perform to help improve the livelihoods of people in the community. The students then went to visit the men's migrant worker hostel called "Sethokga Hostel" that houses male migrant laborers from rural parts of South Africa who move to the city to work in factories and mines. The hostel leaders (called *Izinduna*, in the local Nguni language of isiZulu) spoke to the students about the history of the hostel development that was based on the labor exploitation of black men during the apartheid era. Male rural migrant laborers were concentrated in these hostel typologies and separated from their wives and children for decades, in order to earn a living by digging up gold and minerals in the white-owned mines.

These stories of black labor exploitation revealed to the students how urban planning and architecture were used to facilitate oppressive practices by the Afrikaner-led apartheid government, pre-1994, and how these hostel typologies and laborer communities still exist in current times, 25 years after South Africa's political democracy. The Winter School program and community engagement process was a successful experiment that yielded useful insights for the Black-Studio students and created a learning process for the students from the Tembisa community members. The program focused on the history, culture, and identity of the Tembisa township to get the students to understand the various drivers for the locally derived spatial resolutions that residents in Tembisa township use to appropriate and adapt their environment to suit their needs. This included how locals build (using local materials such wood, zinc metal, plastic etc.), as shown in

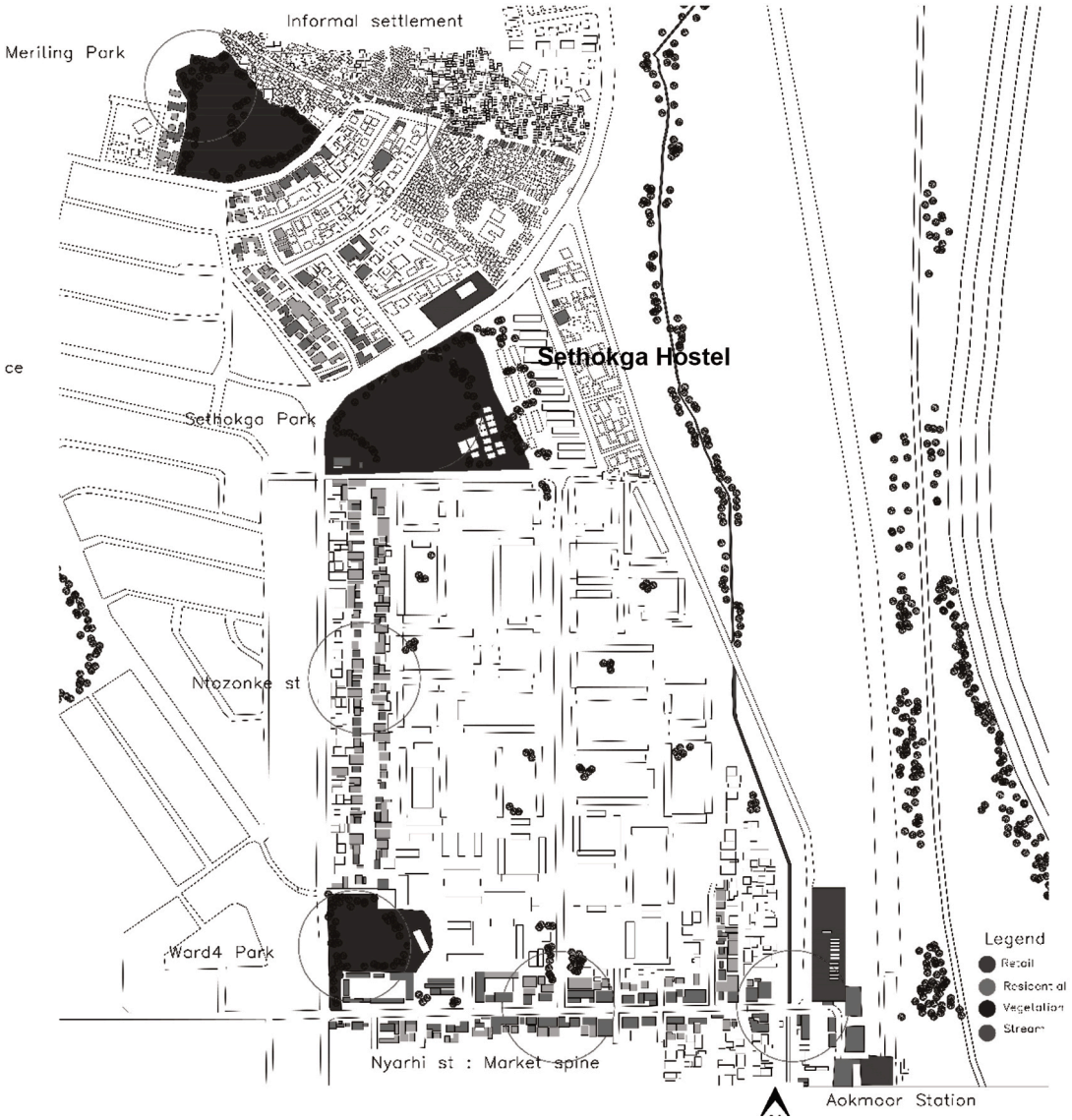

Figure 3: Location plan of Tembisa township that delineates streets that the BlackStudio students explored including Sethokga Hostel, during the community immersion. Drawing produced by students.

Figure 5, their own street selling outlets (called spaza shops in local slang language) and appropriated open spaces and backyard areas to conduct slaughtering, packaging, and distribution of animal meat products (such as *iskopo*, cow heads) that are cooked and sold along the streets and in the men's migrant laborer hostels, mentioned in the previous section.

As part of the study, the BlackStudio Winter School investigated the Tembisa neighborhood as a spatial artefact both at an urban and architectural level, analyzing the street as a feature, nodal mark, economic point, and gateway. Exposure to these local practices of placemaking and spatial appropriation gave the students an understanding that on the African continent and particularly in South Africa, architects and spatial practitioners have not fully exploited the creative, intellectual, or innovative methods that black culture can provide, to respond to local community needs, as listed above. The community engagements and site immersion therefore gave the BlackStudio students experiential knowledge of the people and social networks prevalent in black spaces; enabling them to reflect on what, why, and for whom they are doing the work they are undertaking. Many of these practices demonstrated the incessant flexibility, superfluity, diversity, and mobility

Figure 4: BlackStudio students interacting with community members in the streets of Tembisa township and spaces within Sethokga Hostel that houses male migrant laborers. Activities such as selling of fruits, vegetables, sweets/snacks, and the butchering of meat products (cow heads) were seen on edges and back areas of the street.

in black spaces that Simone (2004) and Mbembe (2004) refer to as operating outside of the conventional (clearly delineated) western derived norms of architecture and urban design practice.

The investigation of Tembisa township raised awareness around the role that architecture should play in black spaces within the formal and informal sector spectrum. Salama (2009) argues that much of what the architect does is (still) "invisible" to the eyes of the public and rarely surfaces from the depths of the private realm the profession often operates in. The idea that placemaking is a practice led by the architect or designer as the expert was therefore challenged by BlackStudio's initiative. Students saw how community members make and layout their own spaces to suit their needs, particularly at a front street-edge interface with self-constructed trading stalls, as well as backyard spaces being used for collecting, sorting, and distribution of goods and waste products (as seen in Figure 4 & 5). This meant that architecture's role needs to be reimagined within an African context as one that mostly aids in strengthening and guiding existing community practices of placemaking towards being sustainable rather than imposing design solutions that are foreign to the space and cultural practices already existing in the neighborhood.

For the remaining seven days of the Winter School, the students produced urban design frameworks and architecture proposal ideas for a selected street in Tembisa that applied some of the placemaking practices and cultures the students learnt about, as mentioned above. These proposal ideas were subsequently presented at WITS university to other students and staff who did not take part in the Winter School program. Prizes were awarded to the three best projects at the end of the presentations. Due to a lack of funds and time, the students were not able to return to the Tembisa community to present their ideas, as they did at the university, which was an unfortunate shortcoming in the outcomes of the program, as the community did not benefit from the students' ideas.

The *Makoporosh* exhibition installation—exploring the urban realities faced in the adhoc production of black spaces

Following the community immersion during the ten-day Winter School program, the BlackStudio students felt the need to test some of the practices they experienced in the Tembisa township with a built prototype settlement that could be experienced at 1:1 scale. The prototype they conceptualized was a self-built informal settlement installation inside an art gallery in the middle of Johannesburg's inner-city. The prototype installation was called "The Makoporosh[5] Exhibition" and was held in October 2016 at the Visual Arts Network of South Africa (VANSA) gallery (see Figure 7 & 8). The exhibition aimed at telling the stories of race and identity politics in South Africa, as experienced by the students who were part of the BlackStudio collective. Each informal shack structure of the sett-

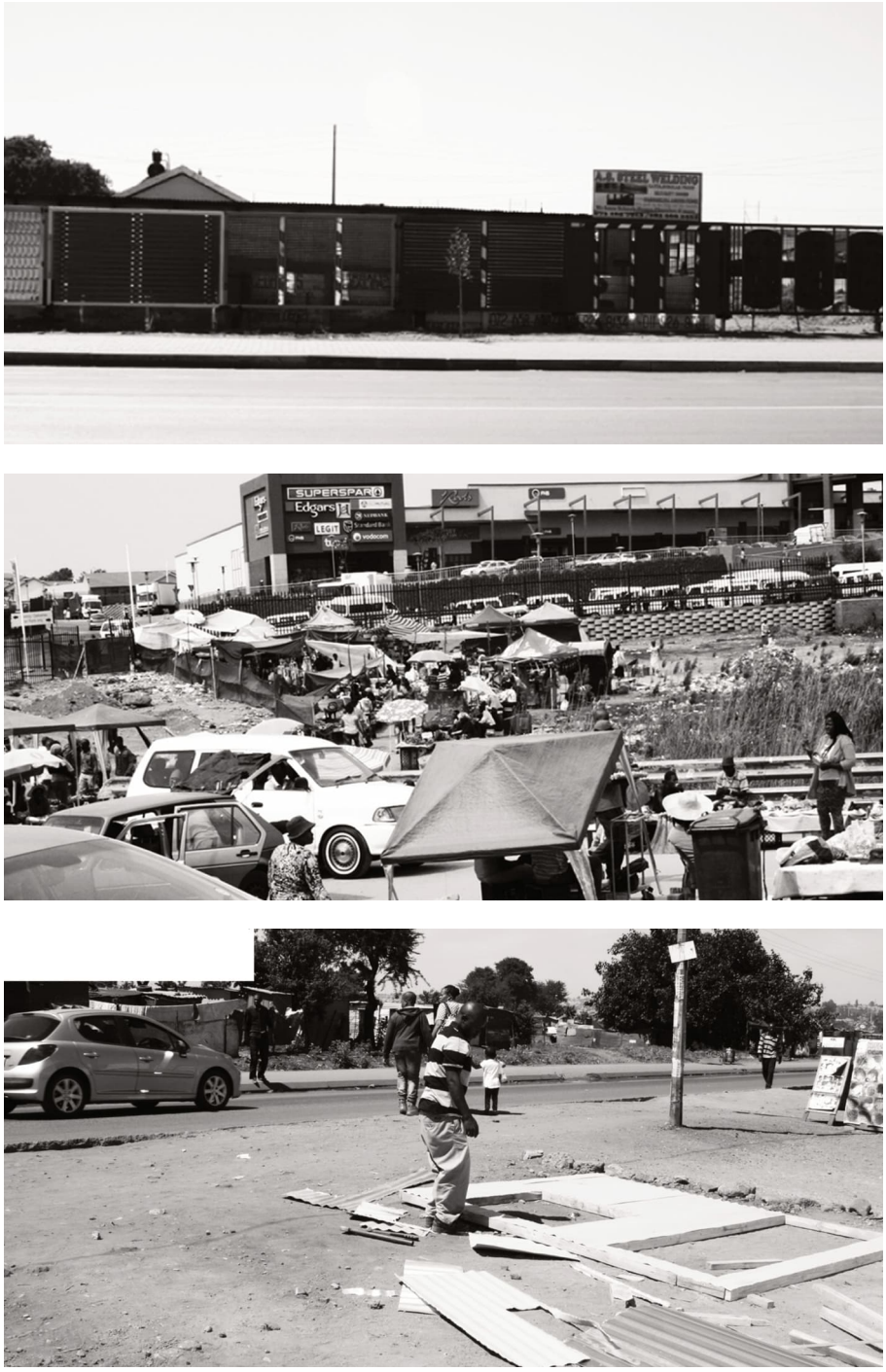

Figure 5: Street based economies in Tembisa at the front street edge interface using self-constructed trading stall materials.

lement presented different narratives of black youth identity struggles, including hair, sexuality, xenophobia, belonging, and so on. The exhibition represented a new way of using architecture to challenge colonial (Eurocentric) approaches to architectural education in South Africa, in line with the spirit of the #FeesMustFall movement, rooted in the call for the inclusion of black urban experiences and practices in the curriculums of architecture and planning schools in the country.

Themed around the African idiom *"umuntu ngumuntu ngabantu,"* loosely translated as "I am because we are," the instillation was designed and built at a 1:1 interactive township space scale, approximately 120 m² in size, with the intention of exploring and understanding the nature of interaction, community, and social behaviors in black spaces. The exhibition included ten exhibitors who used the internal and external built-up shack spaces to express their story and journeys as young black people in the constantly shifting contexts of identity, urbanity, religion, sexuality, and culture, in what they saw as a *Makoporosh* (mix and mash up) of their lived experiences in one space. This included a photographic exhibition on black girls and the politics of hair (see Figure 8), representing the struggles that black girls/women face in schools and places of work in wearing their hair in its natural, kinky state, which is often deemed to look untidy and inappropriate. Some of the other shacks represented issues around black masculinity where black boys who are queer face discrimination within black communities and how they have to navigate their sexual identity within the hetero-masculine environments of many black communities. Other issues presented within the exhibition were of African migration and the experiences of foreign migrants in integrating South African townships, that suffer from the triple traps of xenophobia,[6] poverty, and inequality.

Decolonial dialogue and collective (re)learning through live projects

The installation took place within a period of four days where the students grouped into teams of architects and planners and collected various building materials such as plywood, wooden pallets, and paper sheets that they used to create the 1:1 scale frames of the shack prototypes (see Figure 7). The results of the installation were presented as a three-day exhibition, including a talk around the issues of exclusion that black students in the WITS School of Architecture and Planning have felt in their education, through curriculum, language, literature, and design-thinking based on white Eurocentric approaches and imagery. This exchange helped to empower both the students and lecturers in the Wits School of Architecture and Planning by sensitizing them to the varied types of urban conditions in which (black) students originate from and what informs their approaches to urban and architectural design based on their lived experiences in "black" spaces. This includes self-made and adaptive structures such as trading stalls on street corners for selling

Figure 6: BlackStudio Winter School where students from WITS Architecture and Planning Department workshopped ideas around black space, African architecture, and urbanism as was experienced in Tembisa township.

food (vegetables and meat products), utilizing the courtyard space within housing stands to keep livestock, such as cattle and chickens, and the mixed housing typologies found in many black township settlements constructed with zinc corrugated iron and concrete brick (as shown in Figure 5), which are adapted for multiple uses such as salons, alcohol outlets (known as taverns), and community churches or places to perform traditional African rituals.

The engagement between the students during the three-day exhibition fostered skills and knowledge transfer, exchange, and collaboration between BlackStudio students and other youth, artists, creatives, and practitioners who came to engage with the exhibition. This allowed students to practically test and apply the distinct placemaking adaptive methods that black communities use to create their own spaces of living, trade, and recreation. The students sourced their own buil-

Figure 7: BlackStudio students assembling multiple Shack Prototypes as part of the “Makoporosh” Exhibition at VANSA Art Gallery in Johannesburg CBD, representing stories of black spatial experiences, identity, and culture.

Figure 8: Students presenting their installation pieces to guests in the opening session of the "Makoporosh" exhibition.

ding material (plywood, palettes, plastic and paper sheets, crates etc.) as seen in Figure 7, in similar ways to the black communities they engaged with in Tembisa and used it to assemble miniature shack structures that are a 1:1 representation of many black urban settlements in Johannesburg and around South Africa.

The (re)construction of urban and architectural black realities through the Makoporosh Exhibition, implemented aspects of a building a live project at a smaller scale and added depth to the way the students relate to African urbanism.[7] Although the installation was not meant as a design solution implemented within the Tembisa township itself, it aimed to depict how black communities are implementing design solutions for themselves within their communities, with minimal resources, by resembling these practices within the contained space of the VANSA Art gallery in Johannesburg inner city.

Conclusion

The work of the BlackStudio collective, through the Winter School program talk series and Makoporosh Exhibition, can be seen to have achieved some success in representing a decolonial lens towards understanding the architectural and urban spatial organization processes that everyday black masses in SA practice and how students themselves can conceptualize and design projects that represent this, within academic institutions. The exhibition, in particular, was

successful in giving the audience who attended it a replica understanding of some of the current pressing socio-spatial issues of built form and infrastructures faced in black spaces, through a 1:1 scale live built settlement prototype.

Can decolonized architecture, urban design, and spatial planning pedagogy in the African context, despite its colonial and apartheid histories, be used to move towards developing design and development codes/approaches that embrace the current practices of urban residents in black spaces (Mbembe and Calburn, n.d)? This text therefore argues, through the example of the work of BlackStudio, that it is through the adoption of knowledge and an increased understanding of the manipulation and adaption of space and infrastructure by locals, that African urban spaces can be reimagined and recoded. Thus, to make it possible for black Africans to expand their spaces of economic and cultural operation, to become spaces of increased cultural expression and wealth (Simone, 2004).

1 "Fallist" is a term used to refer to student activists who were part of the Fees Must Fall movement (FMF) in South Africa between 2015 and 2016 (Mazibuko, 2020), embarking on both a fight against increased university tuition fees and the transformation and reform of university education.
2 According to Mbembe (2015) "Decolonising the university starts with the de-privatization and rehabilitation of the public space—the rearrangement of spatial relations... It starts with a redefinition of what is public, i.e., what pertains to the realm of the common and as such, does not belong to anyone in particular because it must be equally shared between equals." (pg.4)
3 A phrase taken from the work of Kenyan author and academic, Professor Ngũgĩ wa Thiong'o, who delivered a memorable lecture on the subject at Wits University, Johannesburg in 2017.
4 Nguni languages are a group of closely related Bantu languages spoken in southern Africa by the Nguni people. Nguni languages include isiXhosa, isiZulu, isiNdebele, and siSwati.
5 Makoporosh is a South African slang word meaning a mix and mash up of things. In the case of the exhibition, it was used to express ho black spaces such as informal settlements represented mixed a mashed up identities as well as the materiality that is used in constructing these settlements.
6 Xenophobia is defined as an aversion or hostility to, disdain for, or fear of foreigners, people from different cultures, or strangers (www.dictionary.com).
7 African urbanism pertains to the way African cities are expanding with regards to population, settlement forms, and infrastructure developments, both formally and informally, through large-scale mega project development, and micro scale everyday placemaking practices of Africans (Steyn, 2007).

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Image Credits

2 Mashego N., 2020
3 Tswai & Maboitshego, 2016
4, 6, 7, 8 BlackStudio, 2016
5 Mowela, 2016

DesignBuild in India

Resisting the Status-Quo

In 2010, five years after establishing an architecture practice in New Delhi, I took a sabbatical and studied urban planning at the Norwegian University of Science and Technology (NTNU), Norway. While there, I accompanied a group of architecture students for their DesignBuild thesis to Kasese in rural Uganda to build a small-scale locker facility for the local soccer team. With a few completed projects under my belt, I was the "experienced" architect on the team and was put in charge of constructing the brick wall for the timber and brick project. Lacking an expert mason on site that day, we soon realized that, despite my professional experience, we were not equipped to build a brick wall with our hands. After failing, thrice in a row, to raise even a few brick courses that would hold, as a first (and so far, the only) in my professional life, I sat down next to the crumbled pile of bricks and wept.

What seems perhaps a strangely personal way to introduce an academic text encapsulates the themes this paper addresses. My experience in Kasese highlighted how my architecture training at SPA Delhi, one of India's oldest architectural institutions, had not prioritized hands-on skills to build habitable structures, something my colleague students from NTNU seemed far more familiar with. It revealed a knowledge gap I hadn't encountered in five years of graduate school and five years of practice. Since then, while continuing to practice and teach in India, the prevalent omission of engaging architecture students with real-world building has become more apparent and are shared here. The paper also explores what is gained for architecture in India by exposing students to real-world building, especially considering the dominant culture of assisted self-building in much of the building activity in India.

To do so, this paper looks at projects by both private and state-funded architectural institutions of varying scales, sizes, and years of establishment. The focus of this paper is on DesignBuild within formal architectural education. However, the paper also presents DesignBuild teaching initiatives outside formal architectural schools, especially those led by artisan collectives. These are highlighted to contextualise DesignBuild education within the larger ecosystem of formal-informal built practices in India. As there are few documented examples and little literature on the subject in India, the cases shared here were mediated solely by recommendations from colleagues in academia and professional practice from over two decades. This text draws dominantly from interviews with faculty (from architecture schools), which initiated these examples, as well as online course information alongside relevant international literature on DesignBuild.

The gap between architectural education and the building practice traditions of India

It is useful to understand the context of the architectural profession within prevalent building practices in India, especially regarding formal-informal building activity. Trained architects are engaged predominantly within the formal parts of the built habitat,[1] usually on large-scale and high-value projects. However, a large volume of building catering to economically and socially vulnerable communities, especially mixed-use housing, belongs to the informal sector, incrementally adding to a substantive portion of India's built stock (National Building Organisation, 2010).[2] These buildings seldom engage architects, relying instead on a dominant culture of assisted self-building. In rural areas, structures with local materials, such as wood, stone, bamboo, earth, etc., are delivered mainly by traditional artisanal communities (Figure 1).[3] On the other hand, urban and semi-urban informal areas rely on colloquial "builders" (*thekedars* in Hindi) who employ more modern materials like brick, metal, and concrete alongside traditional ones. The expertise of these traditional artisans and builders primarily comes from experiential learning instead of institutional training.[4] The modes of design representation they utilize, usually some variation of *naqsha* (Hindi/Urdu for layout plans), are tailored to adapt to varying literacy levels of both the client and builder.Rudimentary sketches, oral agreements, past references, and physical models (not necessarily to scale) are used alongside or in place of technical architectural drawings, with much of this activity happening outside the formally regulated practice of architecture.

These site-based practices predate contemporary architectural education in India while aligning with far older traditions.[5] Their continued prevalence provides an important background to understating the role of DesignBuild in architecture pedagogy in India. Historically, building artisans underwent a hands-on apprenticeship under a master builder (or *Sthapathi* in Sanskrit),[6] wherein the knowledge

Figure 1: Gangaram a master craftsman of Likhai art in the Himalayan region of Kumaon, Uttarakhand. Likhai is a woodcraft that combines construction, carpentry and design. Gangaram is training Lalit, a young apprentice in the craft that is traditionally passed on through generations of families.

of building skills, sciences, and arts was imparted. (Mehta, 2020; Prasad, 2016; & Acharya, 1922). The lack of such hands-on teaching methods in contemporary architecture schools is significant in its departure from this legacy. Architecture, as formally taught and practiced in India today, finds its origins instead in the British colonial period from the late 19th century, which was rooted in orthographic drawing systems that had evolved in Europe post-Renaissance. It started with technical colleges that trained Indian students in modern engineering drawing, intended to produce native assistants for British engineers, archaeologists, and architects working in India (Chatterjee, 2022; Shetty, 2020).[7] While Indian architecture was no stranger to diverse influences, the colonial training through which it entered the modern era displaced and disrupted prevalent knowledge systems of representing and producing built spaces on an unprecedented scale. Ease of replication of drawings streamlined construction systems that were earlier shaped by local material and skill culture. From the diverse regional spe-

cificity of architectural style, colonial architecture was characterized instead by an aspirational uniformity across different regions in India. The codification and simplification created determinism in the idea of space, reducing it to a physically measurable entity (Mehta, 2020; Shetty, 2020). This only intensified as the country entered the industrial and modern era.

Besides the resulting loss of livelihood traditional artisans were also impacted socially. In the newly introduced discipline of modern architecture, technical drawings in studios increasingly superseded experiential hands-on learning building sites as the formally recognized and legitimized form of design literacy. This further reinforced prevalent socio-economic hierarchies of traditional building cultures wherein highly policed access to theoretical knowledge was priced above practical hand trades. These were seen as lower in the social structure and as such lacking both social and economic opportunities for growth (Goswami, 2022; Chaudhary, 2009 & 2012; Sukumar, 2022). The knowledge of formal architecture, accessible largely to the Indian elite since its inception, exacerbated these class and caste exclusions.[8] Marginalized and depleted of traditional networks of patronage,[9] conventional building practices continued to persist, albeit with increasing vulnerability to poverty and loss of livelihood (Narwekar, 1959).

The sidelining of the traditional building knowledge systems continued post-independence. Several scholars have outlined how, despite explorations of indigenous modernity over time, the dominant framework of Indian architecture education still has its basis in the pedagogical model of the colonial era (Chatterjee, 2022; Mehta, 2020; Menon, 1998; Narwekar, 1959; Shetty, 2020). Architectural education today is open to anyone with the requisite qualifications. However, despite affirmative action policies post-independence, the students, faculty, and professional institutions are dominated by the economically and socially privileged. Generationally, those engaged in hands-on building have rarely had access to higher education, in design or otherwise, and have been excluded from the platform and legitimacy accorded to formally trained architects. A privileged hierarchy of the "other" between designer and builder underpins the seemingly neutral portmanteau of DesignBuild.

This raises questions relevant to this paper. Do the emerging DesignBuild initiatives in formal architectural education in India have the potential to expand design "literacy" beyond the existing domain of formal institutional structures? Can DesignBuild teaching help assimilate the wealth of skill literacy in the country into mainstream formal architectural education, creating a more equitable exchange of skills and opportunities between architects and those who build?

In the following chapters, the evolution of DesignBuild will be traced, and the motivations that underpin the recent uptake in interest in this teaching method in architecture schools will be delineated towards answering these questions.

Early examples of the DesignBuild method

Experiments with DesignBuild learning methods involving architects and architecture students started in India outside of formal architectural schools decades before the concept gained traction as an institutional pedagogical tool. Often motivated by issues of equity and cultural identity, these early experiments employed DesignBuild learning methods as part of larger socio-cultural imaginations of space and its production. This was especially true during the decades preceding and following Independence in 1947, as issues of national identity and self-reliance gained prominence. Significant examples were realized in new idealized settlements like Visva Bharati, Shantiniketan (1922), and Auroville (1968), and by organizations like COSTFORD (1985), Development Alternatives (1982), and the Anangpur Building Centre (1991) among others. These initiatives built on the wealth of hand-skills are prevalent in self-building cultures through multidisciplinary collaborations between architects, engineers, artisans, and communities.

Envisioned as an ideal multi-national and multi-cultural city of over 2000 inhabitants, Auroville, in Pondicherry, is well-known for having hands-on building and training practices as part of the spatial culture of the city since its inception in the 1960s. Its founders were committed to incorporating sustainable technologies into their buildings, both regulated and motivated by the lack of electricity, transportation, machinery, or conventional building materials, alongside the availability of a large unskilled labor force. While architects played a significant role in planning the city, self-build solutions that utilized local skills and materials were dominant. As earth was abundant on-site, it became a popular building material, with The Auroville Earth Institute and the Centre for Sustainable Research (CSR) being set up to promote building skills in different earthen building techniques. Open to a wide variety of people, including architects, training programs at Auroville began promoting design-based building innovations, including refinement of the hand press by the Earth Institute to make Compressed Earth Blocks (CEBs), which are used like bricks. Producing up to 1,000 precise blocks daily, their ease of propagation resulted in broader replication and use beyond Auroville. Alongside sustainable practices, using available labor and resources, upskilling, and livelihood generation became part of the legacy of Auroville, resonating with the tenets of DesignBuild (For a deeper exposition, see Kundoo, 2020; Mandeen, 2004; Miles, 2007; Namakkal, 2012).

Similarly, The Centre of Science and Technology for Rural Development (COSTFORD), founded by architect Laurie Baker and civic leader Achutha Menon in the 1980s, pioneered DesignBuild as a means of empowering communities through affordable building solutions (Keswani, 1997; Lin & Adams, 2017). They also prioritized livelihoods by providing upskilling for quality self-building through hands-on training modules. Their large research department advanced a range of innovative construction methods utilizing local resources and traditional techniques – using earth, bamboo, brick, and stone. These initiatives also trained many architects in low-cost, and high-quality DesignBuild techniques, who where drawn to the relevance of COSTFORDS approach in a context where large sections of our population have limited resources.

Alongside initiatives like the Developmental Alternatives and Anangpur Building Centre in Delhi, these early examples provided templates of how a more ground-up model of design and building education could emerge in India which was inclusive of both architects and non-architects (Lang, 2002; Laul, 2001). These hands-on initiatives were more rooted within the contextual socio-economic realities and prevalent building practices. They provided an alternative to the prescriptive drawing-based architecture school curriculum of their time and continue to attract architecture students. The past decade has seen a resurgence of interest in DesignBuild within architectural institutions as well as outside. The following sections discuss emerging landscape of DesignBuild pedagogy in India.

DesignBuild teaching in architecture schools

Despite recent momentum, instances of DesignBuild in Indian architecture schools remain limited. The projects discussed here were initiated after 2010, before which, while sporadic examples were recalled, DesignBuild had an even more marginal and largely undocumented presence. The reasons for the recent increase are manifold and can partly be attributed to greater exposure to international trends in the field by both students and faculty. After the economic liberalization in India in the 1990s, more architects started working and studying abroad. These days, the speed and spread of influences are further aided by information technology. Furthermore, India went from having only 12 schools of architecture in 1972 to more than 400 (Council of Architecture, 2023)[10] at present, three-quarters of which were opened in the last two decades (Sabikhi, 2020). This exponential increase has created many challenges including the lack of human and financial resources to run these institutions (Sabikhi, 2020). At the same time, the need to differentiate and gain a competitive edge allows for more diversity in pedagogical approaches, including towards DesignBuild. The studios discussed below are some prominent recent examples of these initiatives and were identified via snowball sampling. Faculty from public and private institutions, both new and old, from different parts of the country, were interviewed, and their insights have been shared here.

Figure 2, 3: Students work on a pavilion as a part of a DesignBuild exercise at SEED, Kerala.

On their motivations for mounting DesignBuild studios, most interviewees felt that the studios were uniquely suited to provide value-added outcomes that drawing-based studios lacked. Rajasekharan Menon, the Academic Chair at the SEED-APJ Abdul Kalam School of Environmental Design School in Kerala, noted that for students, participation in DesignBuild studios "inculcates a sense of work; it inculcates the sense of working with hands and getting yourself involved." An early effort at DesignBuild at SEED involved the relocation of an existing bamboo public pavilion set for demolition in a nearby town. With student participation, it is in the process of being re-erected at the SEED campus to function as part of a future workshop space. Students from different years will work incrementally on various aspects of the project rather than building in one go within a single studio module. Through hands-on building the studio aims to help students gain an understanding of architecture as a collective practice by learning "how a community comes together to build, how do you work with your hands and how do you feel the material" (Menon) (Figure 2,3).

Similarly, for Dr Soumini Raja, HOD of the Avani Institute of Design, Kozhikode, Kerala established in 2015, the main takeaway for students participating in the third-year DesignBuild studio was a newfound respect for both the material and the work of artisans. She concurred on the value of "learning directly from people proficient in the use of material, to have a collaborative process where community, labor, and architecture come together," which students gained through building a temporary metal and timber landscape pavilion on campus. For Kruti Shah, Visiting Faculty at CEPT University (Est 1962) in Ahmedabad, Gujarat, DesignBuild studios add pedagogical benefit through "appreciation for the people who

execute, which I think is very important for us to recognize and respect." Shah has been part of offsite collaborative DesignBuild studios, including one that trained students on earthen-building skills in collaboration with Thannal, an artisan-rooted training platform in rural Tamil Nadu. She also incorporates DesignBuild as a teaching tool in her urban informality study studios, which have been discussed later in the paper. She feels that DesignBuild studios make "students realize how much effort it takes to get something done. Because when they do it digitally, it's very easy for them to make complicated details. But when it comes to executing it, they are lost." Overall, DesignBuild was seen to benefit students by promoting a collaborative mindset, appreciation of real-world constraints, and the skill needed to physically realize design ideas and greater respect for those executing projects. This resonates with the experience and literature of DesignBuild globally.

However, overarching challenges for mounting DesignBuild studios remain. Typically, these studios require more time, money, material resources, and specialized expertise. This is compounded by the somewhat restrictive framework of the Minimum Standards of Architectural Education Regulations, 1983, as prescribed by the Council of Architecture (COA), which governs architectural education in India.[11] Almost all architecture schools also need to be affiliated with partner universities, which introduces yet another layer of bureaucracy with the power to influence detailed curriculums. The five-year undergraduate course predominantly prioritizes drawing-based study of subjects. Even in the case of building construction and structural sciences, which could be more hands-on building courses, the prevalent mode of training is usually drawing-based. The only subject courses explicitly mentioning handwork are the basic carpentry and model-making workshops. This absence of a curricular mandate or impetus, coupled with the constraint of material resources, further impedes the incidence of DesignBuild studios. Additionally, newer institutions face these challenges even more acutely (Menon, Dr. Raja).

One of the ways in which faculty have navigated these hurdles was to integrate DesignBuild studios within ongoing infrastructural development on campus. Many newer colleges, such as SEED in Kochi and, SAL in Ahmedabad, run on campuses which are still being built. DesignBuild studios leverage this by engaging students with the building activity. The challenge of integrating these courses within the prescribed curriculum is also addressed by offering shorter workshop modules lasting a few days or weeks outside the course credit system. Usually held during the summer and winter semester breaks, these are often open to participants outside the institution as well. These are mostly paid modules allowing institutions to cover the additional costs associated with DesignBuild. The challenge of fitting these studios into regulated curriculum timelines results in an overwhelming preference for temporary pavilions with dry construction techniques and requir-

Figure 4: Pavilion built as part of the Digital Craft module led by Urvi Sheth at CEPT.

ing less construction time rather than more elaborate structures. Sometimes, studios use an incremental approach wherein students work on a part of a structure over time, in successive batches towards the whole. DesignBuild studios often need to innovate while arranging for funds, whether mobilizing within institutional resources or tapping outside it through corporate social responsibility funding, developmental grants, etc.

CEPT University has been an exception in that resources and institutional mandate to build habitable structures, including fabrication tools and human and financial resources, are more readily available. Their workshop department explicitly states that "Experimentation with materials, prototyping, testing, craft explorations and learning while making is an integral part of the design culture at CEPT University." Established in Ahmedabad in 1962, CEPT University has both the institutional legacy of an active workshop culture since inception (Sheth, Menon), coupled with recent heavy investments in fabrication machinery and resources. CEPT emerged prominently in the DesignBuild landscape, given the scale, complexity, and number of

DesignBuild initiatives over time initiated by various faculty members. Of these, in her role as Director of Workshops, Urvi Sheth supports fabrication-centred modules within the various design departments at CEPT. She also leads a "Digital Craft" module as part of the CEPT Winter School (over multiple iterations since 2013), which has explored how "developments in digital form-making could help to negotiate between design and crafts" (Figure 4). Exploring a pedagogical approach that combines digital fabrication and hands-on artisan collaboration, the modules have gradually evolved from prototypes to temporary pavilions to more complex permanent installations, as discussed later in the paper.

Collaboration, frugality, incrementality, and temporality often underpin the DesignBuild studios borne partly out of the necessity of overcoming time, workforce, and resource constraints. It bears mentioning that much of the assisted self-building culture in India grapples with similar constraints. Some studios concerned with social impacts, such as Kruti Shah's Light Infrastructure, discussed in the next section, therefore, embrace these constraints as integral to relevant DesignBuild interventions in resource-scarce settlements.

DesignBuild teaching and social impact

Community driven projects motivated by social impact goals are an influential and high-profile part of DesignBuild studios in some countries and on international architecture platforms. However, in India social impact is rarely central to the studio objectives of most hands-on building studios in architecture schools, including those discussed above. An important contributing factor to the institutional reluctance in undertaking community-oriented DesignBuild projects is the reputational and legal risk involved in navigating the building permission regime,stakeholder expectations, and long-term accountability. Moreover, in many Indian towns and cities economically and socially vulnerable settlements usually fall within legal grey zones of informality. Student-led built interventions in these areas may attract undue scrutiny as they can sometimes upset the fragile balance of regulatory control. In at least one case described by a faculty member from a prominent architecture school in northern India (who wishes to remain anonymous), a community-driven refuge project for migrants had to be suddenly aborted with students already on site. Local authorities abruptly withdrew prior verbal authorization, fearing that institutional building activity, however small, would be used by the community as a means of legitimizing rights on contested land.[12] Such lengthy and often unpredictable stakeholder engagements required for social impact projects make the usual demands of time, money, and human resources within DesignBuild even more pronounced and, thus, more challenging. Local institutions face the extended scrutiny far more acutely than international teams that leave post DesignBuild project execution.

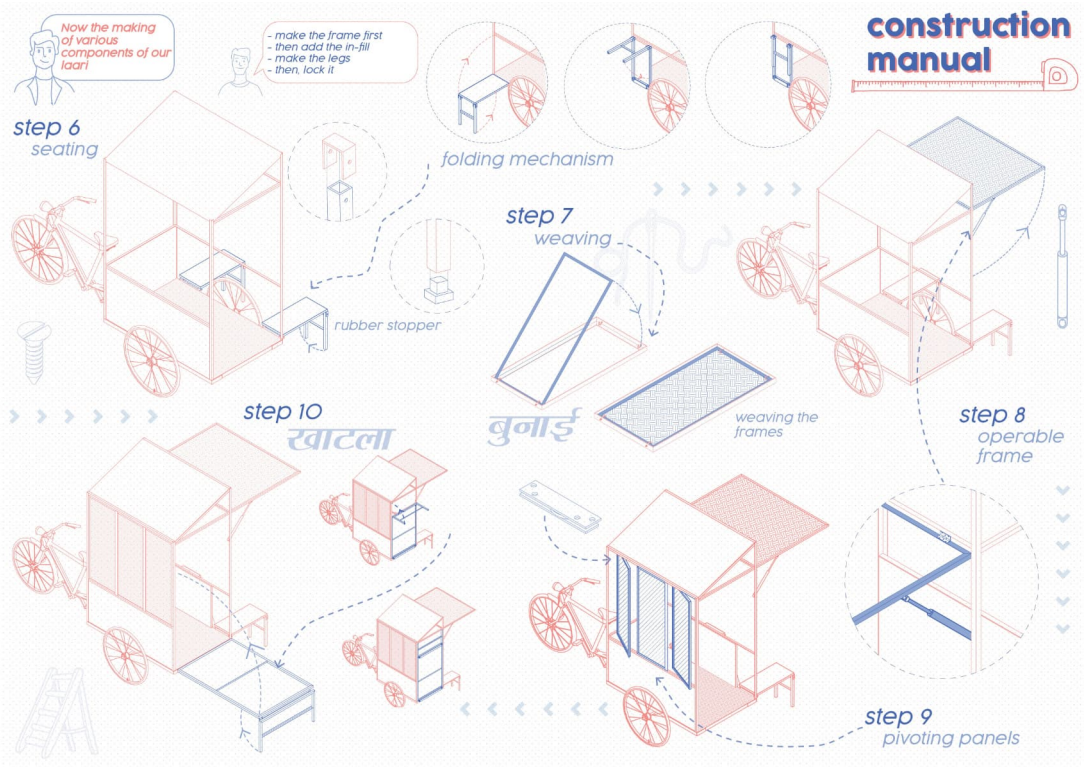

Figure 5: Bilingual construction manuals incorporating colloquial elements developed by Kruti Shah led studio Light Infrastructures for co-building low-cost structures in informal settlements.

The resource feasibility of student-built structures for social impact also comes into question due to the abundance of affordable skilled and semi-skilled labor in many neighborhoods where the social infrastructure is needed. While the exposure to these unfamiliar and challenging contexts is educative for the students, their contribution to built asset creation can be insignificant, given readily available building skills in these neighborhoods. As some respondents pointed out (again, preferring to remain anonymous) such projects might waylay the limited resources that could contribute to community needs more efficiently and amount to virtue signalling.

Although the appropriate approach might not be yet clear, social impact remains a vital question for DesignBuild in India, given its contextual realities. The building industry employs a sizeable percentage of the most economically and social-

ly vulnerable of the country's informal workforce. Given this, for DesignBuild studios to focus solely on building without engaging with the socio-cultural realities and political economy of the DesignBuild ecosystem will be a telling omission. Interviewees concurred that contextual approaches for optimizing the social impact of projects need to evolve as DesignBuild pedagogy takes root.

A DesignBuild studio that attempts to do so is Kruti Shah's studio at CEPT: "Light Infrastructures" which explored design-based incremental solutions to infrastructural challenges of economically vulnerable informal settlements. In the contested spaces inherent to informal settlements working with the temporal and dynamic solutions within limited resources becomes critical. Students work with local communities and organizations to map socio-spatial conditions and co-create built interventions which vary in nature–from additions to existing structures to independent objects such as a hawker's cart. Instead of top-down, large-scale, and static- solutions, the studio looks at "Frugal tactics of space, manifested through small-scaled urban devices that can plug into existing infrastructural systems: transportable and dismountable objects, capable of accommodating diverse, productive activities." Shah also likens the studio experience to a bridge between education and practice, which aims to sensitize students to the tangible impact of design and innovation, especially within constraints.

Light Infrastructures' process also absorbs colloquial terminology and employs non-standardized methods of representation (sketches, poster art, etc.) instead of relying solely on orthographic technical drawings (Figure 5). Step-by-step construction manuals were created as an accessible document especially for self-building as an outcome of the studio. Such approaches expand the language of design communication, making it more accessible to community-based co-designing. In offering a space for locally specific design idioms to evolve while embracing both formal and informal tools of representation, studios like Light Infrastructure illustrate how DesignBuild can be made more inclusive. They also indicate locally relevant, process-oriented approaches to expanding the social mandate of DesignBuild studios, beyond the end use of built objects.

This is a departure from how many high profile DesignBuild student projects with social impact ambitions are framed largely almost exclusively around the end-use benefit—as space for shelter, healthcare, education for vulnerable communities etc. Efforts such as Light Infrastructure's illustrate the potential of DesignBuild studios to leverage their process for social impact even if the prescribed end-use does not serve an obvious social goal. Social impact can also be achieved through building awareness, discourse, patronage, and livelihoods. Interestingly, this outlook is reflected in many recent DesignBuild initiatives that have emerged outside of architecture schools and are discussed in the next section.

DesignBuild teaching outside architecture schools

Given the dominant self-build culture, DesignBuild training initiatives outside architecture schools are contextually significant to a holistic appraisal of the India's emerging DesignBuild. In recent years, a new generation of such initiatives has gained ground outside formal architectural institutions. They build on the multidisciplinary, artisan, and community-focused DesignBuild legacy of their predecessors such as COSTFORD, Auroville etc. Though diverse in location, focus, and scale, these examples share similarities in their engagement with traditional building techniques and locally available materials such as lime, earth, thatch, bamboo, etc. Many simultaneously explore value addition through modern technology—such as parametric modelling, digital visualization tools and mobilization through social media. By providing entrepreneurial skills alongside technical skilling these organizations center livelihoods as integral to DesignBuild culture. Some of these include (e.g., GeeliMitti, Uttarakhand and Made in Earth, Bangalore) which promote earthen building; the Balipara Foundation in Assam, and Uravu in Kerala, which promotes bamboo construction; Thannal in Tamil Nadu, which works with local techniques of earth, thatch, lime, etc.; and Hunnarshala in Gujarat, one of the older, more established institutions working with a range of traditional materials and techniques.

The reach afforded to such initiatives by online platforms has meant that recent initiatives are somewhat more feasible and accessible than past examples. Though they exist outside architectural institutions, sometimes in remote regions, their workshops attract many architecture students. They offer immersive access to India's diverse material and building culture, rarely present in standardized drawing-based curriculums. Real world engagement with climate resilience, livelihood access, and living heritage, often integral to these initiatives, offers students a tangible experience which abstract studio exercises might lack. These organizations also partner on DesignBuild projects in architecture schools. Such collaborations offer them access to additional resources, research facilities, and reach. The increasing partnership between such initiatives and mainstream architecture schools is thus a fertile area for the country's emerging DesignBuild pedagogy. Some of these attributes are highlighted through the example of Hunnarshala.

Hunnarshala[13] was established in the wake of the devastating earthquake in Bhuj, Gujarat, in 2001 when a group of master artisans and civil society (including architects and engineers) came together for rehabilitation work. It illustrated the collaborative potential of integrating modern engineering, traditional artisan knowledge, and self-building practices in post-disaster rebuilding (Tewari et al., 2017; Vahanvati & Mulligan, 2017). The approach centered on helping build back communities, culture, and livelihoods—not just structures. (Tewari et al., 2017). Today, its focus is on training artisans to build sustainable habitats through

Figure 6, 7: The Digital Craft Pavilion – a student DesignBuild project by CEPT University in collaboration with artisans from Hunnarshala.

skill-building within a training school called Kaarigarshala. Alongside this, an incubation of artisan-led businesses is conducted under Sankalan, a subsidiary enterprise which provides support in the form of design assistance, entrepreneurial training, and finance management. Their teams have worked on low-cost disaster relief projects across India and abroad and high-end architecture and conservation projects (Virmani, 2017). While the core focus of Hunnarshala is artisan skilling and livelihoods, their training programs are often open to and popular with architecture students.

Hunnarshala also associates with architects and architecture schools. It collaborated with CEPT University on a DesignBuild studio in 2017 called Digital Craft, a long-term research project on a craft-based construction approach to computation led by Urvi Sheth. Through combining complex computational fabrication with artisanal skills, a contemporary craft-based construction methodology was evolved for creating a permanent structure that serves as a public pavilion on the Sabarmati Riverbank in Ahmedabad (Figure 6, 7). Students and artisans jointly designed and fabricated a technically challenging asymmetrical parametric brick vault - a “Digital Craft Pavilion.” As with prior Digital Craft studios, the larger aim was to explore a contextual and cost-effective process of executing complex computational structures in India. This was done by leveraging the wealth of existing hand skills instead of relying exclusively on digital fabrication. In Sheth’s words, “The challenge of constructing the computationally generated form by architecture students is completed by the craftspeople and students of craft. The research elucidates gaps at various levels, from design to construction.

Figure 8: The Digital Craft Pavilion – a student DesignBuild project by CEPT University in collaboration with artisans from Hunnarshala.

Craft-based solutions bridging these gaps establish a methodology which makes complex geometry constructible in present-day India when access to digital fabrication methods is still evolving and expensive" (2019). One of the small but important outcomes of the Digital Pavilion project was an artisan apprentice being trained in the use of advanced computational design software. This highlights the potential of DesignBuild collaborations between artisanal collectives and architectural schools to create hybrid educational spaces that promote a reciprocal exchange between design and build ecologies.

Another increasingly popular means by which students access DesignBuild training in organizations outside architecture schools is through the semester–long internship programs mandated in the fourth or fifth year of the graduate course. DesignBuild architecture practices working closely with artisans are growing in popularity

for architecture internships. Within architecture schools, these connections, whether through workshops, collaborations or internships expand the idea of design literacy and design thinking to include diverse, knowledge systems.

In conclusion

DesignBuild is gaining momentum in India, aided by the ease of access to technology and media not available before. Multiple new initiatives emerged even in the course of writing this paper both within and outside of architecture schools. Within architecture schools, educators enumerated various advantages of DesignBuild learning which resonated with the literature on the subject globally. They also highlighted constraints in organizing funds to mount complex, resource intensive DesignBuild studios, which is of importance in charting the prevalence and potential of this pedagogical tool globally. Mapping this global resource hierarchy is especially critical in evaluating international student-built projects with a social impact mandate.

In the Indian context, the larger ecosystem of DesignBuild which serves a substantiative section of the population and for whom architectural services remain inaccessible came up as an important consideration. This ecosystem continues to shape built environments beyond the formal profession of architecture. Thus, the steadily increasing number of DesignBuild educational initiatives outside of architecture schools are important to a holistic and contextually relevant understanding of DesignBuild pedagogy in India. These initiatives are not geared exclusively towards architects. Instead, they are open to artisans, engineers, as well as laypeople.

At the same time, the emerging DesignBuild pedagogy encounters and needs to address the cultural stigma associated with hands-on work. Prioritization of theoretical learning over manual skills remains entrenched in higher education systems, including architecture schools. Here as well, DesignBuild initiatives located outside formal structures have a greater motivation and agility to resist entrenched institutional biases and hierarchies. Led by a diverse mix of builders and designers, these initiatives are expanding the understanding of design literacy beyond formal architectural training. Through structured collaborations with formal architecture schools as well as stand-alone initiatives, these examples present a tantalizing potential to bridge the gulf between formal architectural education and informal knowledge systems in architectural education in India.

As these efforts gain critical mass, there is an opportunity to learn from the global experience on the subject while simultaneously evolving an approach that aligns with the challenges and potential of the Indian context. To do so however there is an urgent need for more research and literature on methods, approaches, and

theoretical frameworks which is currently lacking. Without this, the discrete initiatives might not coalesce into an incremental body of knowledge with a lasting influence beyond isolated projects. This shall be a loss, especially given a general consensus amongst those interviewed that within formal architecture schools DesignBuild, through its inherently collaborative, tangible, and experiential approach, is uniquely placed to help bridge conventional architectural teaching with the prevalent socio-cultural building practices. This gap dates back to the original introduction of formal architectural education in India. Engaging with issues of informality, labor, livelihoods, craft, and design literacy through DesignBuild pedagogy holds promise in the Indian context going ahead. We would be amiss at this stage to focus our efforts solely on training students to build, without using the process as a means for a broader institutional engagement with the political economy of how built habitats are created and consumed, and by whom. Engaging with issues of informality, labour, livelihoods, craft and design literacy through DesignBuild pedagogy holds promise in the Indian context going ahead. It requires that while training students in building habitable structures DesignBuild learning efforts also consciously build a wider discourse on the issues that underpin it.

1 Informal buildings fall outside state regulation, taxation, and protection mechanisms, may be illegal and face sanctions. However, as part of the larger informal sector, they often provide a response for critical needs and opportunities of economically vulnerable communities not met by the formal sector, especially in housing.

2 According to the Report of the Committee on Slum Statistics/Census, Ministry of Housing and Urban Poverty Alleviation, Government of India (National Building Organisation, 2010), 93 million people lived in informal urban settlements at the time.

3 There is a living heritage of building craftsmen across the country that reflects the diversity of material and built culture in India. Until recently, they served and survived on the building needs of their local communities. In the last few decades, especially post liberalization in the 1990s, access to, and choice of newer cheaper materials, has led to a gradual decline in both the quality and number of skilled building craftspeople.

4 This was evidenced in our work with a senior artisan of the Kumaoni craft of Likhai wood carving, Gangaramji between 2011 – 2017. In his 80s and one of the last master artisans in the region, he insisted on training his only known apprentice, Lalit the same way he had been trained in his craft by his Guru–by assisting him on commissions. Starting from the least skill-oriented jobs, Lalit was given greater responsibility only when he mastered a simpler task until he could eventually work independently. (More information at Kumaonbuild.org).

5 Mentions of an architect, Suradeva, who presented the model of a temple before building it at Pataliputra in the Upanishads (Narwekar, 1959), and the carvings of drawings on stone at Ashapuri and Bhojpur (Dhanorkar, 2017) are a few instances of such representations in history.

6 The four classes of terrestrial artists include Sthapati (architect), Sutra-grahin (master mason or supervisor), Vardhaki (mason or carpenter), and Takshaka (stone or wood cutter), with each stage in progression to reach the highest level: Sthapathi. The Sthapati must be proficient in all Vedas and Sastras, possess draftsman skills, ability to design, be well versed in music, math, history, painting, and must be acquainted with the use of instruments (Acharya, 1922; Mehta, 2020).

7 An important exception is Kala Bhavan (now the Faculty of Technology and Engineering, MSU Baroda) established in 1890 by the erstwhile Maharaja of Baroda, with the stated mandate of "producing skilled artisans and apprentices by imparting instruction in local language" combining traditional and modern education approaches (Raina, Habib 1991). Though one of India's older modern universities, the influence of this approach in the formal architecture curriculum remained limited.

8 While caste discrimination is constitutionally illegal in independent India similar to racial disparagement in Western societies, it is institutionally and systemically entrenched and shapes almost every aspect of life, where educational and economic opportunities tend to be more easily accessible to socially and economically privileged students (Goswami, 2022; M. Neelakandan & M. Patil, 2012; Sunandan, 2022). While limited literature exists on social exclusions in architectural education, architecture schools are also a part of this system, deepening the lack of opportunity that the prevalent caste and class hierarchies have perpetuated.

9 The traditional Indian builders seldom had opportunities to construct buildings since government and private buildings in big cities of British India and Princely states were built in European architectural style with the help of blue-prints supplied by the European architects (Narwekar, 1959). The indigenous knowledge systems informed by the local climate and ecology did not fit into the colonial narrative of knowledge as a universal, objective, and deductive entity, which in turn led to the decline of such systems (Bhaduri & Singh, 2012).

10 Other sources put the number at upwards of 800.

11 While the National Education Policy introduced in 2020 aims to introduce more flexibility, it is still too early to see how it will impact architectural education in India.

12 Attempts by informal workers to occupy space and build communities in the city's slums have continued in defiance of the State's repeated attempts to evict them, and the tension between the two has been a regular feature of city-building since Independence (Centre for Policy Research, 2022).

13 The suffix "shala" in Hindi refers to a space of specialized practice.

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Part 3

Participation and Network-Building

Chambimbal

Community Empowerment and Participation at the Inter-American Housing and Planning Center (CINVA)

Industrial consolidation in Latin America mostly occurred between the two World Wars. An accelerated movement and concentration of population took place in the main cities of Colombia and similarly across Latin America during this period. However, in Colombia, this process was intensified due to the political violence and the riots that followed the assassination of the liberal leader and presidential candidate Jorge Eliécer Gaitán in 1948. According to documents within the Inter-American Housing and Planning Center—Centro *Interamericano de Vivienda y Planeamiento* (CINVA) archive at the National University of Colombia, the population in Bogotá doubled in a timeframe of twelve years; whilst in 1938 Bogotá had 350,000 inhabitants, by the early 1950s its population grew to nearly 700,000 (Peña, 2010). In response, one of the fundamental proposals of the Colombian National Estate and the Organization of American States (OAS) was to mitigate further social and political unrest due to spatial segregation, poor housing, and deficient public services infrastructure, as well as the extreme contrasts in the distribution of wealth—all consequences of this mobility. With Colombian ex-president Alberto Lleras Camargo as its first Secretary, one of the main points in the agenda the OAS prioritized was to facilitate housing proposals to the greatest number of inhabitants in cities and rural areas.[1] It is within this context that the Program of Technical Cooperation—the agreement under which Bogotá was selected as the city to host the Inter-American Housing and Planning Center—*Centro Interamericano de Vivienda y Planeamiento* (CINVA) was signed at the Organization of the American States (OAS).

CINVA was inaugurated in Bogotá in 1952 (Calvo Isaza 2013, Medina 2021).[2] As an early precursor as a site of education and an experimental center for urban planning and housing projects, CINVA was, from its inception, considered an academic model in terms of research methods, technical and interdisciplinary

Figure 1: CINVA (Inter-American Housing and Planning Center), *Universidad Nacional de Colombia*, Bogotá.

approaches. It also quickly became a mandatory reference in research and postgraduate studies across Latin America, as well as a reference for the development of new academic programs, such as the Social Sciences School at Colombia's National University.

CINVA was conceived as an educational project where trainees worked together with a range of urban and rural communities, a defining characteristic of what more recently has been referred to as characteristic of DesignBuild projects. As an educational institution, CINVA welcomed trainees from multiple countries of the OAS across South and Central America and the Caribbean. These funded trainees were professionals with varied backgrounds that came to be part of a one-year program with a focus on experimentation and investigation around housing (both rural and urban), on dissemination of knowledge, and on technical consultancy for the improvement of housing. Methodologically, a strong emphasis on technical experimentation, field work, participatory methods, and community building were at its core (*Universidad Nacional,* 1954). Trainees were joined by exchange students from universities from abroad, mainly from the American continent, as well as by a range of Colombian postgraduate students who were part of the taught modules or participated in research projects led by some of CINVA's staff and consultants (Rivera Pérez, 2002: 118).[3]

At CINVA, research was applied and the curriculum defined by the relationships of CINVA with other housing research centers and public policies. Under the supervision of the Division of Planning and Housing of the Pan-American Union, CINVA worked autonomously both technically and administratively, facilitating the coordination between universities and official housing, planning, and economic development programs across Latin America.

Colombia's National University in collaboration with the Institute of Territorial Credit—*Instituto de Crédito Territorial* (ICT)—acted as CINVA's hosts (Niño, 1987: 52).[4] A new building was designed and constructed at the campus of Colombia's National University in Bogotá by CINVA staff members.[5] The building hosted the institution until 1972, when CINVA's activities ceased (Figure 1).[6] US architect and first director at CINVA, Leonard Currie argued that CINVA's approach to housing was expressed in the architecture of the building. In Currie's words, the purpose-built building "did not strive for monumentality," with no permitted design clichés, and determined by its "functional requirements, available materials, and established building techniques, site and climate, convenience, and non-assertive harmony (*Architectural Record*, 1957)." Furthermore, for Currie, CINVA would confront the housing deficit in Latin America by developing the basis of what he designated as the "science of housing (Ramírez Nieto, 2022)."[7] For Currie, CINVA's training program and publications, interprofessional knowledge, and collaboration achieved distinct solutions: forms that grew, emerged from local traditions, responded to patterns of local culture, and were responsive to local materials and weather (Currie, 1955; Romero, 2021: 28–39).[8] Already at its early stages, CINVA's interprofessional field work—and its approach to theory and working methods—could only be rarely found in Colombia, or in the wider world.

Today, CINVA is still mostly recognized within architectural history and practice because of the CINVA-ram block press: a simple and low-cost portable machine for making building blocks and tiles from soil developed by Chilean engineer Raúl Ramírez. Also, due to the iconic large-scale housing development in Bogotá, Ciudad Kennedy, which was the largest build in Latin America under the Alliance of Progress (Offner, 2018: 47-70).[9] However, in this chapter it is argued that beyond CINVA's technical and managerial contribution, it was CINVA's social work that also left an imprint across CINVA's housing campaigns across Colombia and Latin America. Thus, this chapter focuses on Chambimbal (1955), one of CINVA's early rural housing campaigns led by Argentinian architect Ernesto Vautier, Brazilian social worker and director of the Social Service Section at OAS, Maria Josephina Rabello Albano, and Colombian sociologist Orland Fals Borda, all three widely recognized scholars, practitioners, and activists in their fields. Within CINVA, Chambimbal embodies a significant moment: it was an early housing campaign and the first collaboration between Albano, Fals Borda, and Vautier, three

important figures in terms of applied research and participatory methods. This intersection allows one to draw out the emergence and consolidation of participatory methodologies, the roots of community participation and mutual help, as well as the agency of education within these that defined CINVA's thought and ac-tion. Highlighting the development of collaborative practices in Chambimbal that shaped CINVA from its inception which range from construction, to community organization and forms of governance, this chapter emphasizes the importance of the symbiotic relationship between what Fals Borda described as "people's and scientific knowledge," an approach today recognized as the grounding basis of Fals Borda's Participative Action Research framework, PAR (Gutierrez, 2016).[10] Chambimbal is also a project that is exceptionally well documented, and from which larger conversations and publications around community participation emerged.

When considering CINVA as a precursor of DesignBuild, what CINVA suggests is that it is necessary to expand DesignBuild's definition in terms of its reach, scope, and scale. CINVA was a postgraduate training program where trainees from across South and Central America worked jointly with CINVA's advisors, staff, and communities, and in some cases with university students. CINVA had a twenty-year duration where management, governance, technical aid, mutual help, and collaborative practices where at its core—even if its projects varied in duration and scope and had spatial and social implications across Latin America and beyond.

CINVA

In its twenty years of operation, CINVA led seventeen different programs, delivered sixty-two modules from 1952–72, and trained 1450 professionals (Rivera Pérez, 2002).[11] Trainees were selected and guaranteed a balance between background knowledge and expertise (Ramírez Nieto, 2022). Candidates from multiple countries and backgrounds were selected by their home countries through calls open to experienced professionals with background experience in housing and with an ongoing working contract with a governmental institution. This selection process points to CINVA's belief that the housing deficit could not be addressed through architecture alone. It also explains the wide range of housing projects that CINVA attended to, as fellows were bringing with them their professional experience but also suggestions of projects in their home countries that CINVA would respond to.

CINVA consisted of a significant number of projects and modules delivered across Latin America, which have so far gone unnoticed due to the project's scale and scope making it impossible to address in the brevity of this chapter. However,

Figure 2: 1953 CINVA fellows, Bogotá.

Figure 3: Photograph during CINVA visits to the Perseverancia neighborhood Bogotá, 1953.

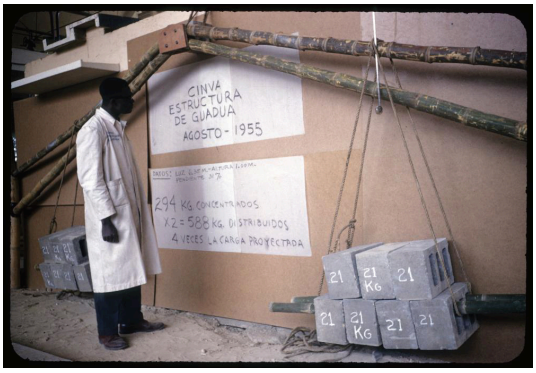

Figure 4: CINVA fellow photographed with a bamboo structure being tested, Bogotá, 1955.

Figure 5: CINVA Laboratory, Bogotá, 1952.

they are essential for the understanding of CINVA's role in driving the consolidation of social projects across Latin America and beyond. Projects included developing of rural housing in Colombia (Anolaima, Líbano, San Jerónimo, Chambimbal, and Saucío amongst others) and other places in Latin America (Aroma in Bolivia, Manzanillo, La Cruz in the Dominican Republic, and the urban peripheries of Caleras and Morelos in México), technical innovation (CINVA-ram block machine), and research on materials and construction methods (that ranged from assessing ICT's project in Quiroga's neighborhood in Bogotá, research on stabilized soil, bamboo construction, concrete prefabricated elements, and modular blocks outcome of the CINVA-ram machine), urban peripheral housing in Colombia (Yocoto, Sogamoso, Siloé, Soacha), self-built projects (Arequipa and La Chalaca in Perú,

Laches and Periquillo in Colombia and Barquisimiento in Venezuela), and experimental houses and large-scale, low-income housing projects (San José de Costa Rica, Ciudad Kennedy in Bogotá, Valencia in Venezuela, Juan del Corral in Medellín Colombia, Colonia Presidente Kennedy in Tegucigalpa, Honduras). Taught modules were also delivered in different Latin American territories, such as Minas Gerais, Recife and Rio de Janeiro (Brazil), Chaco (Argentina), Arequipa and Piapur Lima (Perú), La Paz (Bolivia), Santo Domingo (Dominican Republic), Barquisimento (Venezuela), Tegucigalpa (Honduras), Córdoba (Argentina), Santiago de Chile (Chile), Costa Rica, El Salvador, and Ecuador, as well as different Colombian regions (Armenia, Chinacota, Villa de Leyva, and Bogotá).

In the same way it is important to recognize that CINVA's early years (1952–56) were characterized by a technical response to the growth of cities and the housing deficit. During these years the world changed fast, especially Latin America due to the rise of dictatorships like that of Gustavo Rojas Pinilla (1953–57) in Colombia, the military dictatorship in Venezuela (1948–58), Juscelino Kubistchek in Brazil (1956–61), and the military dictatorship of Augusto Pinochet in Chile (1973–90) amongst others.[12] The challenge was to understand how to operate within these specific Latin American situations and conditions, where there was no homogeneity but shared urban challenges. The seminars on rural housing from 1956 onwards became an anchor to understand these geopolitical particularities.

As a response to the housing crisis and to low-cost housing, CINVA had four principal approaches: training, research, directed technical support, and scientific exchange. In terms of the curriculum, these were addressed within CINVA's yearly curriculum that consisted of: a first stage consisting of (1) an orientation course and (2) visits to selected sites and institutions (Figure 2 and 3). A second stage consisting of (3) a basic course, and (4) specialized taught modules that included two of CINVA's most important taught modules, the Regular Module on Housing (*Curso Regular de Vivienda*) and the Regional Module on Rural Housing (*Curso Regional de Vivienda Rural*).[13] These were delivered by technical and specialized staff selected directly by the OAS (Rivera Pérez, 2002).[14] A third stage was characterized by (5) training projects and (6) research practices and a fourth stage consisted of (7) individual studies and internships, defined by practical experience. During the fourth stage each fellow was part of two group projects—one urban and one rural—and one individual project that could be suggested by CINVA or by the government of the fellow's country of origin. Finally, (8) the final stage of recapitulation.

CINVA started its activities on the transformational capacities of technical developments with great confidence. It focused its efforts on developing materials and built structures to reduce housing costs. For example, during CINVA's early years, the design and construction of prefabricated elements and structures such as

stairs, roofs, windows, walls, and foundations, and the integration of local materials such as bamboo, rammed earth, and cement-floors into the construction processes were one of CINVA's greatest focuses. These were firstly tested at CINVA's laboratories to then be mobilized to CINVA's construction sites and projects (Figure 4 and 5). Ramirez's CINVA-Ram is also an example of these developments (Figure 6). However, research and education at CINVA were not limited to technical methods of construction nor the use of construction materials only. From its beginnings, Leonard Currie and CINVA's teaching staff, the Colombian architect Cesar Garcés, Argentinian architect Ernesto Vautier, and Peruvian engineer David Vega-Christie, emphasized the role of teamwork and interdisciplinary work; a methodological approach that soon characterized most of CINVA's operations, becoming CINVA's structural pillars.

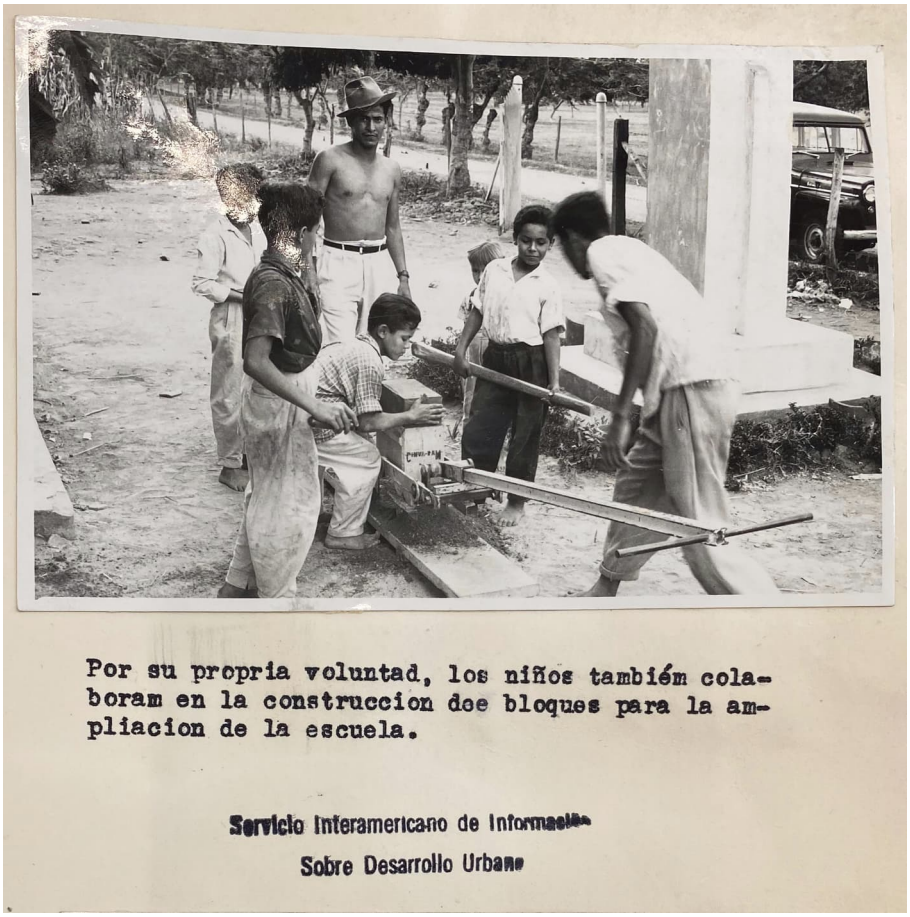

Figure 6: CINVA-ram being used in Chambimbal by fellows and the community, 1955.

Chambimbal

Chambimbal is a *vereda*, small housing settlement in the countryside, in the Department of Valle del Cauca in southwest Colombia. By 1955 Chambimbal accommodated approximately 45 families of small owners and tenants, mainly dedicated to agriculture. CINVA's aim was to support Chambimbal's inhabitants in overcoming their housing deficit and deficiency, which, in the words of Albano, Fals Borda, and Vautier, was inextricably related with an underlying educational problem rooted in a lack of knowledge of their context, reality, and environment, and holding an important potential for improvement through ownership and empowerment.

At Chambimbal, Albano, Fals Borda, and Vautier worked together in developing a participation methodology that later characterized CINVA, which established a relationship between planning—in physical terms—and social work. This approach drew upon Caroline Ware, a social worker from the US who visited Bogotá in 1953 invited by Bogota's City Council to support the definition of their Communal Action Plan in the context of CINVA's activities in the capital city (Currie, 1953). During her visit, Ware delivered a series of lectures at CINVA to support the development of social work with communities which, within CINVA, had already initiated processes of mutual help. One of Ware's most influential lines of work was the understanding that, it is only when the individuals, families, or communities participate in the solution of their own problems that any help or support provided would be valuable and permanent.[15] Ware's approach, informed by Puerto Rico's experience in mutual help schemes, some housing projects in Venezuela, and by her role as consultant of the Social Work and Work Division and Social Matters at the Pan-American Union, could be explained under two premises: firstly, that in many countries there was a new hybrid migrant population that was not used to the poverty-stricken conditions and marginalization they were forced into, and secondly, the needs of this population would never be fulfilled by technical or economic resources alone (Albano, 1957).[16]

In Chambimbal, Ware's approach was more democratic, educational, and local, as one of the guiding principles established by Albano, Fals Borda, and Vautier was to respond to the conditions and resources on the ground. This participation methodology was also informed by CINVA's earlier experiences and also became part of the module Regular Course on Housing (*Curso Regular de Vivienda*), and then expanded in Albano's, Fals Borda's, and Vautier's *Manual de Investigación y Extensión en Vivienda Social* (Manual of Research and Extension in Social Housing) (Figure 7).

Albano, Fals Borda, and Vautier's emphasis was placed in training Chambimbal's community to work towards a more active engagement and improvement of all aspects of life. During Chambimbal's housing campaign, work was directed to-

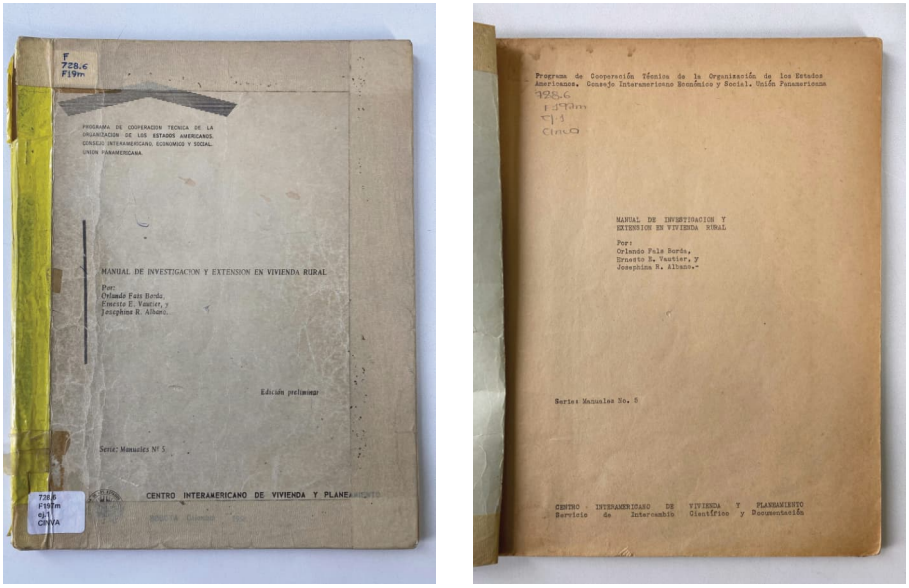

Figure 7: Photographic spreads from *Manual de Investigación y Extensión en Vivienda social.*

wards an activation and awakening of Chambimbal's human, social, and material values. Training sessions took place in the shape of meetings, workshops, and building, and included detailed and conscious study of their challenges and problems, of available resources, and finally through programming and executing plans of action.

Chambimbal's 1957 report illustrates how this was developed in stages (Albano, 1957: 3).[17] The report explains how CINVA's work at Chambimbal began with the familiarization of the reality of the community. The gathering of factual evidence defined the early research stages and involved the understanding of long histories of land occupation, to exhaustive analysis and reports of singular cases, a practice that at this time was rare in the context of new housing and housing upgrade projects (Diaz, 2018: 12). This was followed by the construction of "action programs" that, through interprofessional work, focused on the construction of an experimental housing unit, housing extension campaigns, and specifically for Chambimbal's case, taught modules delivered to the students and staff from the neighboring *Buga's Escuela Normal Agrícola* (Normal Agricultural School) who would support the experimental house construction and would later liaise with the community to support agricultural practices (Albano, 1957). Chambimbal's rural housing project then concluded with setting a series of recommendations to the newly formed Neighborhood Board, who would oversee the continuation

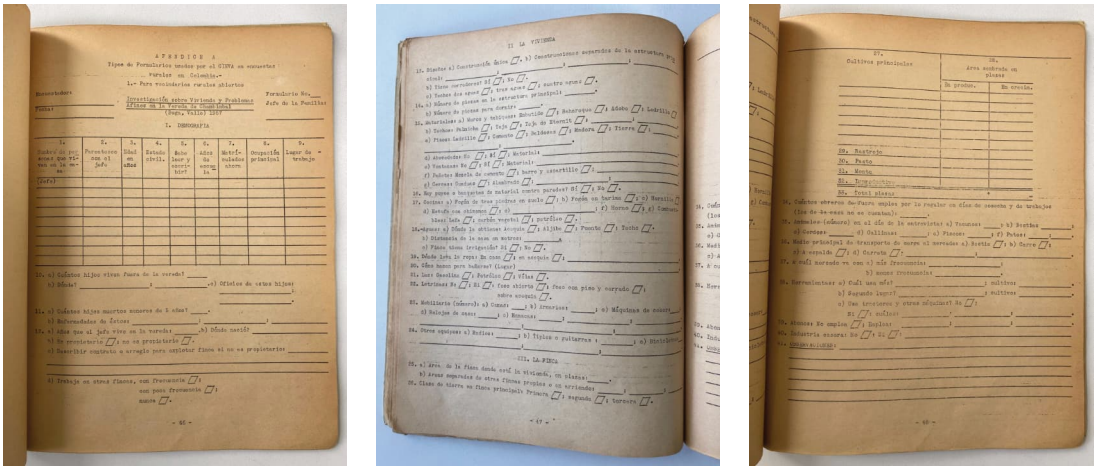

Figure 8: Appendix A, interview format used by CINVA in rural interviews in Colombia from *Manual de Investigación y Extension en Vivienda social.*

of the already initiated projects and initiatives. This chapter emp-hasizes two distinct moments to illustrate the particularities of CINVA's metho-dology. First, the initial research stage which, according to the 1957 report, was characterized by the encounter of a global context (trainees) with a local reality. Second, the "action program" defined by the construction of the experimental house, hand in hand with what the 1957 report refers to as "community development."

Chambimbal's first stage

Initially, CINVA established connections with local institutions and authorities that would be involved in the process. Fellows from Colombia, Panamá, Costa Rica, Colombia, Venezuela, and Costa Rica trained as architects, agronomists, experts in malaria, and social workers amongst others, made site visits and established and built their own accommodation and work facilities. Through interviews, CINVA trainees aimed to understand Chambimbal's demography, housing, ecology, culture, and personalities (Figure 8). This initial stage was complemented by bibliographical research on Chambimbal's geography, history statistics, and property registers.

As part of the first research stage were also studies on Chambimbal's existing forms of inhabitation. These were approached through a similar, almost scientific approach; through a categorization of spaces and their individual uses, construction elements, and materials (Figure 9). This work, undertaken by CINVA's

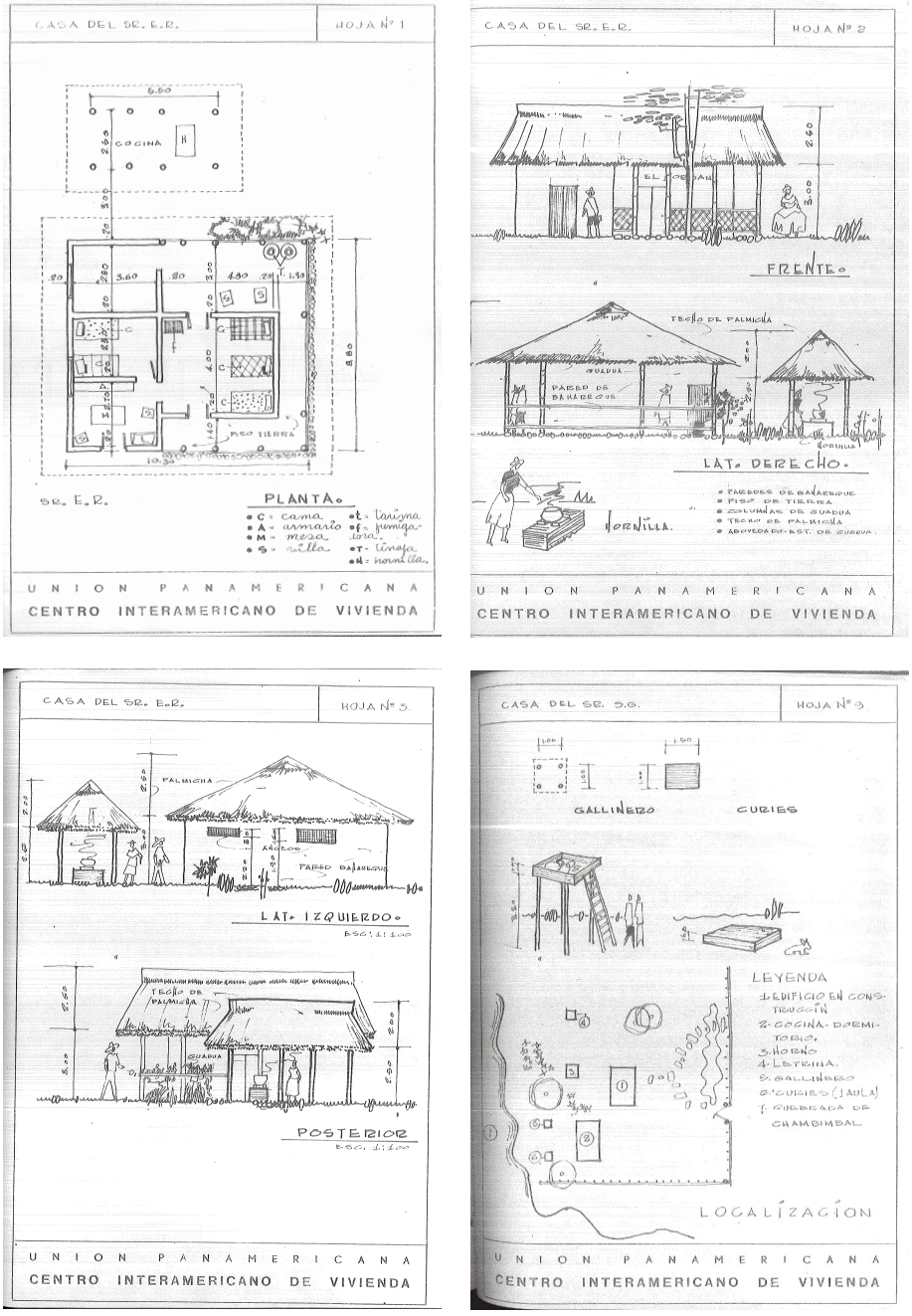

Figure 9: Drawings elaborated by CINVA fellows around the existing housing of Chambimbal. Presentations from Chambimbal Levantamiento Fotografico, 1957.

trainees, described interior domestic spaces, form, and use, as in, for instance bedrooms, corridors, and kitchen. Structures that did not respond to these spatial manifestation of their heritage and mode on inhabitation, are called "secondary structures" in the report. Some are, for instance, latrines, "*caney*" (a bamboo roof under which tobacco is dried), "*enramada*" (a wooden or bamboo structure to protect a water well), or for the outside oven, and the "*gallinero*" (a 2 to 3-meter-high bamboo box held up on stilts) (Figure 10).

Despite its relevance, this initial empirical and ethnographic approach had its limitations, and it is important to acknowledge, that in some cases, it was also problematic. For instance, the language used in the report referred to Chambimbal's population as "these Indians," referring to the Quaimonóes indigenous people, and to "wizards" for the elders even though they were aware of their history of displacement and genocide led by the Spanish colonization in the "history" section of the report (Albano, 1957: 9). There was also a defining distance between interviewer and interviewee characterized by the interview process (Figure 8 and 11). CINVA's methodology of "knowing the community" was clearly defined by an ethnographic approach that allowed, to a limited extent, CINVA's staff and fellows to become familiarized with the territory and community. It was an exercise of data collection and analysis for CINVA's own purposes and on CINVA's own terms.

Chambimbal's action program

The "action program," which included the construction of a 1:1 inhabitable prototype of the experimental house, characterized the second stage of Chambimbal's housing campaign. As in other CINVA's projects, the framework of the "action program" had partially been developed in advance, but as Vautier argued and as in Chambimbal's case, most of the these needed to be further developed in response to the local conditions and challenges and adjusted on the ground. This is how the experimental house was defined by the studies undertaken in the initial stage, and later modified as a result of workshops and exchanges through informal conversation but also structured meetings initially put in place by staff and trainees of CINVA. As part of the "action program" CINVA's housing campaign was communicated in meetings including the local and municipal authorities, church, educational authorities, hygiene centers, radio and newspapers, as well as the regular neighborhood meetings and assemblies that shaped the project day by day. From an almost absent community engagement, the 1957 report illustrates how by the third meeting, a neighborhood assembly was established, and its president elected by popular vote. Chambimbal's experimental house was designed and built by CINVA's fellows and Chambimbal's community in collaboration with staff and students from the *Escuela Normal Agrícola* from Buga (Figure 12 and 13). It was a 75m² unit composed of a dining/living room, kitchen, washing space, bathroom, bedroom, storage

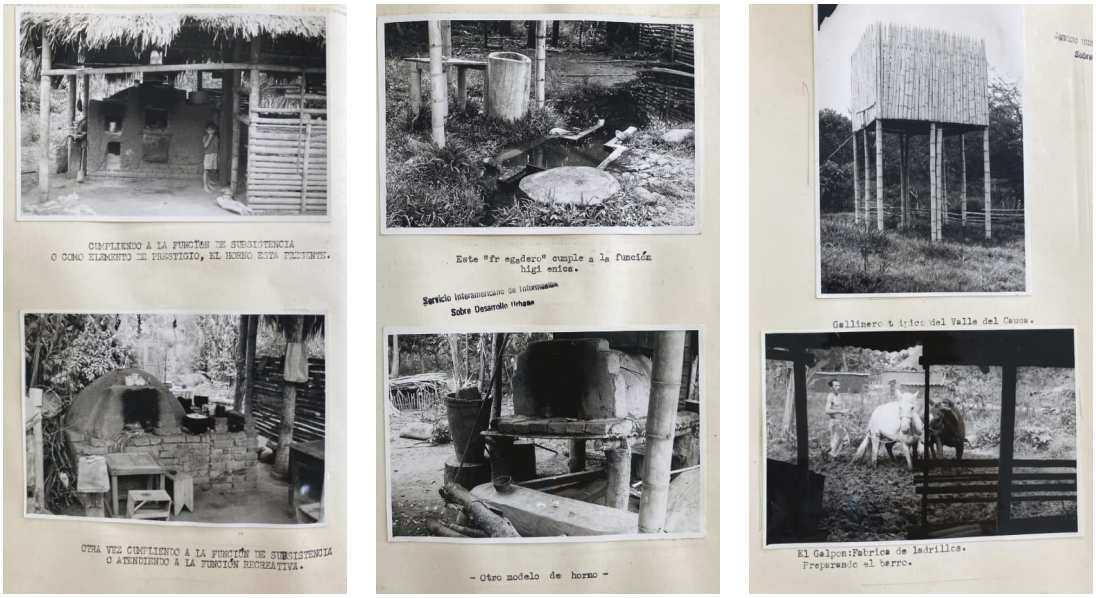

Figure 10: Photographic documentation elaborated by CINVA fellows around the existing housing of Chambimbal, 1957.

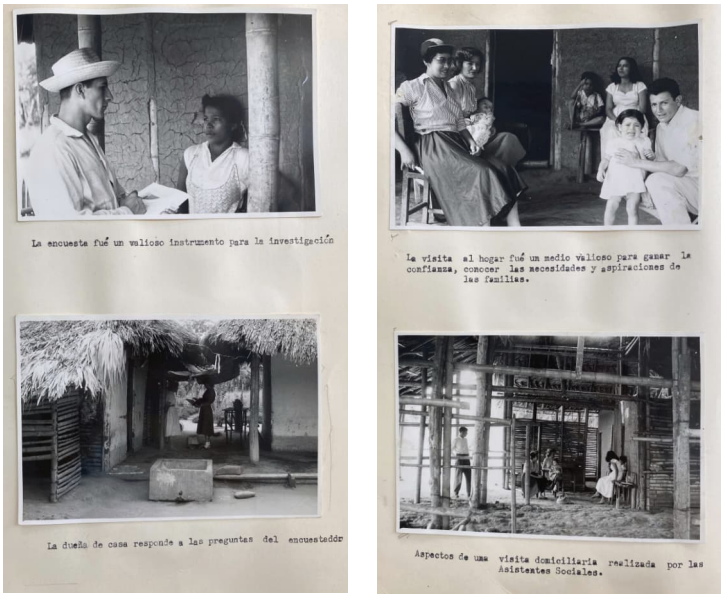

Figure 11: Photographic spreads from Chambimbal Levantamiento Fotografico, 1957.

Figure 12: Building process of the experimental house in Chambimbal, 1957.

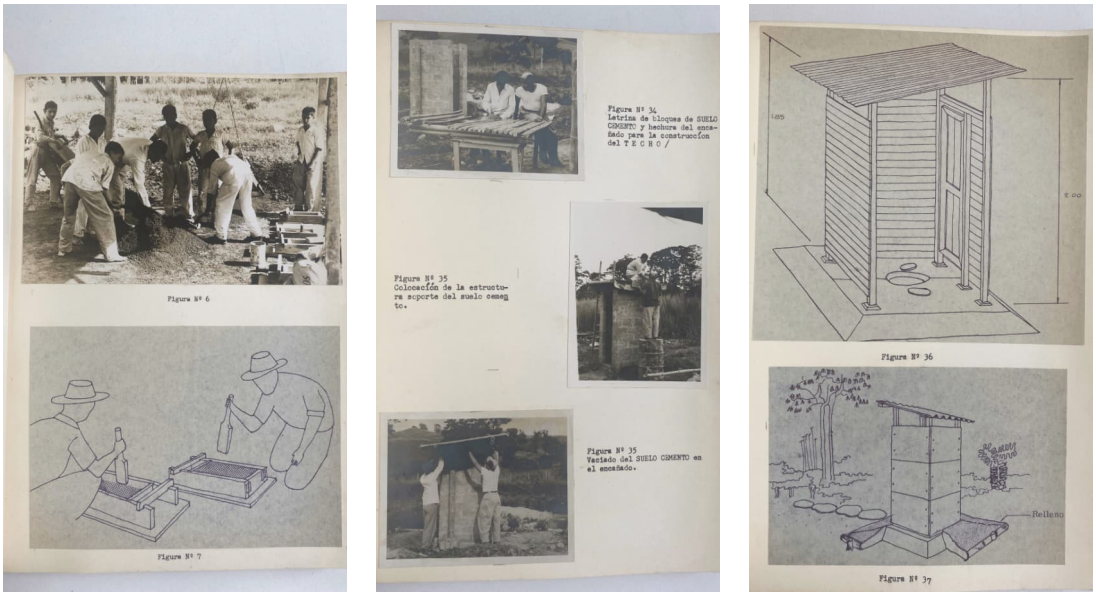

Figure 13: Application of soil cement in Chambimbal's rural housing construction, 1957.

space, and a latrine, a secondary structure that was separate from the house (Albano, 1957: 64). The outcome of its construction with solid earth blocks from the site (aided by the CINVA-ram machine) was a house where spaces were fragmented and compartmentalized. Some even had ceilings (an architectural element absent in the original housing structures found on site), and bamboo roofs covered in clay tiles. As a countering argument from the CINVA team for the choice of material, even if it was more expensive than palmicha (local palm leaves), the clay tiles require the same structure and less maintenance when compared to the palmicha (Albano, 1957: 67).

Chambimbal's experimental house illustrates that throughout CINVA's housing campaigns the predominance of a modular design and construction and questions of construction efficiency, economies, and available local work force, superseded typological experimentation. As in all CINVA's projects, the priority was to guarantee the improvement of a housing scheme supported by CINVA's technical developments and studies, by forms of prefabrication in response to the particularities of the site, by an economy of means (material and labor), and transferable skills. CINVA's "experimental house" prototype was studied in detail in the workshops in Bogotá (an existing 1:1 built example still stands on Colombia's National University campus).

It is worth emphasizing here that as Chambimbal was a rural campaign, it posed particular challenges when thinking about the totality of CINVA's projects. For instance, in Chambimbal, CINVA's team understood the importance of what they had identified as "secondary structures," and complemented the construction of the experimental house with the construction and, in some cases, redesign of these, in partnership with trainees and the Chambimbal's community. This is important, as it sheds light firstly on the role of interpersonal relationships that CINVA's trainees, staff, and the community could strengthen due to the lack of time constraints that characterized some of CINVA's urban projects. Secondly, on the possibility of working through a "secondary structure" essential for a rural population, and not for a hybrid and migratory urban community that characterized most of CINVA's urban projects. Furthermore, as Chambimbal illustrates, the scope of the project focused on housing betterment, and had no infrastructural, industrial, or new housing demands such as, for instance, in the case of Sogamoso, Colombia, that redefined the entire urban-rural area, or as the case of Ciudad Kennedy, whose scale, scope, and population is incomparable. Furthermore, mutual help and participatory action as forms of action and governance also define these projects. As architectural historian Nilce Cristina Aravecchia has demonstrated, Ciudad Kennedy for instance, was seen through the consolidation of social relations between families, housing units, and neighborhoods, as well as in the future inhabitants' participation in all planning stages of the project (Aravecchia-Botas, 2019: 70-81).

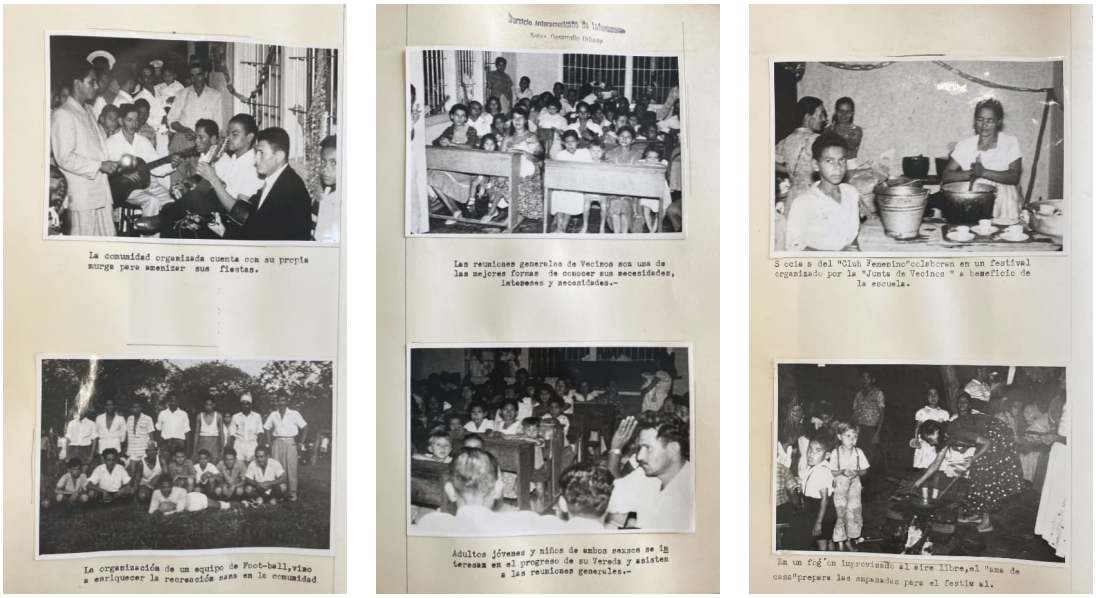

Figure 14: Social work and engagements at Chambimbal, 1957.

Mutual help and participatory work

A lot can be said about the design and spatial organization of the building in Chambimbal, as well as about the interpretation of the sociological and scientific approach that informed the way data was gathered in the interviews. However, what this chapter aims to emphasize is that CINVA's approach to housing through managerial discourse—thinking through efficiency and modes of production, needs to be understood beyond physical structures. In Chambimbal, as in most of CINVA's housing campaigns, there is a strong link between the development and construction of these structures with community participation (Sumplemento Informativo CINVA, 1963).[18]

Mutual help and participatory work sat at the core of all CINVA's projects. In terms of participatory work, Caroline Ware's work was of great influence. As evident in Chambimbal, this understanding informed and complemented CINVA's methodological frameworks. The initial paragraphs of Chambimbal's report from 1957 summarize Vautier, Albano, and Fals Borda's approach to rural housing and community participation. Drawing upon Ware, they emphasized how rural housing problems cannot be solved financially by the future inhabitants due to their low income and therefore lack of available capital, nor by the technicians themselves who would only be able to reduce costs through construction and design.

> "That is why, traditionally, they construct their houses in collaboration with their families and neighbors, and exceptionally, employ a master builder whilst recurring to the most accessible materials in their local environment [...] the peasant therefore gives us a solution to his housing problem, using his own resources and materials, and framed within a cultural framework that his own elders and cultural environment offer."

Vautier, Albano, and Fals Borda further argue:

> "It is not through housing construction that the problem [of housing deficiency] can be solved, but through the strengthening of peoples capable of desiring and bettering their own house [...] The concrete knowledge of their social reality and environment constitutes a starting point for the planning and program of their education. Amongst the diverse problems that affects the population, the housing problem must be considered within the cultural, economic, and physical framework that conditions them. Therefore, the need of researching this reality as a totality, and of framing that action within housing field must be central in the development of the community."
> *(Albano, 1957).*[19]

As seen before, in Chambimbal, social work, community empowerment, and interpersonal and interprofessional relations are transversally present at all stages. However, it is also interesting to see how this is made manifest through-out the 1957 report and how the distance that characterized the initial research stage molded into forms of responsive and intimate forms of engagement. This was thanks to construction workshops described above, informal conversations, as well as CINVA's emphasis in shaping and formalizing distinct participatory forms of governance. The report starts by describing an apathic community that did not trust CINVA's staff nor their proposals of housing improvement. The community, who had no previous experience in community organization and collaboration was reluctant to change and collaborate (Albano, 1957: 70). The neighborhood meetings, one of CINVA's community building mechanisms, were initially characterized by the absence of community interventions and very poor attendance and engagement. As briefly mentioned before, by the third meeting community leaders were elected, and soon after a list of priorities were drawn up by the community, which could not all be met due to the scope of the housing campaign (Albano,

Borda, Vuatier, 1958: 79).[20] However, in response to the community's needs and to CINVA's aims, they focused on the first two needs: the construction of a school and housing betterment through training sessions on construction that led to the experimental house as well as to some of the "secondary structures" mentioned before, whilst focusing on supporting governance models based on community organization and mutual help so that the community could work, and later maintain and continue developing the project together. The weekly neighborhood meeting attendance and the community's engagement and participation improved, albeit slowly. Similarly, was the case for interprofessional meeting of CINVA's staff, local and national institutions, and Chambimbal's inhabitants. The agency of the community leaders elected within the community grew, and a neighborhood association was quickly established. Assisted by CINVA's staff and members, a woman's-only club emerged which later led the housing extension campaign based on their previous experiences and solutions to some of the challenges they faced.

This doesn't mean to imply the initial ethnological approach was insignificant, but that as a methodology characterized by distance and observation, it also pointed to important gaps such as intimacy, trust, embodied understanding of the problematic faced, and a respect and appreciation for local knowledge and skills. However, as the meeting and assemblies of the action program paved the way for a more engaged community, which as the report concludes, was subsequently empowered, and organized, and desired further action.

In Chambimbal, CINVA's role was molded and responsive to the needs and courses of action of the community whilst at the same time empowering the community and building trust in themselves and their material and human resources (Figure 14) (Albano, Fals Borda, Vautier, 1958: 95).[21] CINVA's early framework of mutual help (*ayuda mutua*) and self-built schemes such as Chambimbal informed other processes of communal development in urban rehabilitation projects. An important development took place a couple of years later in Siloé, Cali (1957–58), a neighborhood with 20,000 inhabitants from mining communities that arrived to rented lands within these coal extractive landscape at the beginning of the 20th century. The idea was to "study a community" that synthetized some of the characteristic problems of Latin American cities: "illegal" housing on the peripheries (referred to as "slums"), lack of infrastructure, roads, and housing (*Sumplemento Informativo* CINVA, 1957). Alec S. Bright from the UK directed the project in collaboration with Albano as co-director. Consultants included Rino Levi from Brazil and Fals Borda from Colombia. CINVA's fellows came from México, Argentina, Cuba, Brazil, Perú, Chile, Venezuela, Uruguay, Haití, Colombia, and Nicaragua with professional backgrounds in engineering, law, anthropology, architecture, eco-

nomics, and social work. The emphasis, informed by the work previously undertaken in Chambimbal, was to empower the community towards establishing structures and networks for community participation so that the community could solve their own problems and challenges. From the very early stages of this housing campaign, Siloé's inhabitants shared their concerns about the project's intention and methodological approach. They expressed their worry about the possible clearance of their built environment and future relocation to a new-built social housing project—which was a commonly used approach by then across Latin America (Calvo Isaza, 2013: 76). Initially seen by CINVA as a disorganized and fragmented community that halted some of their field work and approach to community work, what the existing population in Siloé demonstrated was that their community was organized and politically active, but in a way that neither CINVA's staff and fellows, nor the local government were aware of. Therefore, if there is something important about this project it is the multiple and intense conversations and social engagement rather than the spatial, material, or built proposition in small or large scale.

Empowerment and community participation

Beyond technical innovations, what Chambimbal's housing campaign contributes to CINVA—as Siloé and others did—was the potential of organized action through mutual help and education, and one that allowed for "the creation of conditions for the emergence of a new ethos of social action, in which Fals Borda saw one of the deepest meanings of socio-cultural change (Diaz, 2018: 11)." Modernization of rural activities—which in this case is demonstrated by CINVA's managerial and organizational approach to housing and governance—was enhanced by education made manifest through workshops, dialogue, communal neighborhood meetings, interprofessional exchanges, and a multiplicity of exchange platforms. For Josephina Albano, the defense and consolidation of social work and the social worker within CINVA was key as it allowed, in her words, the "discovery of the strengths that move the community, its natural leaders and existing groups; to know the community needs and to awaken their desire for betterment and community work for finding the solution to their shared challenges (Gonçalves, Benmergui, 2022)." For Fals Borda, education was the means by which a passive attitude could progressively transform into an emancipatory attitude for communities. It was also the way for staff and students to lead on forms of research activism that promoted radical change through political innovation. This coincided with the early stages of Participatory Action Research (PAR), a theory and methodological framework that later characterized Fals Borda's work and that recognizes the importance of popular and situated knowledge as knowledge building. As evident in Chambimbal, and feeding into PAR, some of CINVA's guiding principles such as a multidisciplinary approach to housing, and community participation as key

to guarantee continuity to the decisions made by institutional and educational spheres. This approach did not only also inform CINVA in its later stages, but can also be traced in some of DesignBuild examples.

CINVA experienced many changes throughout the years; this chapter offers only a glimpse of a much longer and complex history. CINVA's contributions are of vital importance when recognized in terms of impact for Colombia and Latin America. Even if based at Colombia's National University, CINVA was not only a teaching method or an educational experiment. The importance of participation and mutual-help within CINVA's pedagogies and lines of action are evident in what Colombian architectural historian Ana Patricia Montoya Pino defined as the terms in which CINVA's overall experimental and educational proposal should be understood: (a) community development as a discourse between economic and social development promulgated by international bodies such as de OAS and the CEPAL, (b) the notion of community action, within the framework of community processes, self-built and mutual-help, (c) urban renewal through the rehabilitation of "slums," and lastly, (d) the notion of social housing: affordable, hygienic, productive, and communal (Montoya Pino, 2021:24). But furthermore, what participation and mutual help also informed and shaped were site-specific models of governance still relevant today for low-income, new housing and housing betterment projects, as well as for DesignBuild projects.

Equally, CINVA's contributions are a vital tool for the comprehension of the history of urbanism and urban planning in Colombia and Latin America but still constitute an overlooked gap within international architectural historiography.[22] CINVA was political: on the one hand responding to the OAS and Pan-America demands, whilst on the other hand having its own autonomy and finding its own political grounding in each of the housing and educational projects involved. Its scale was significant. Its housing projects and taught modules were present across Latin America. Throughout its twenty years of operation, it had a significant number of Latin America students and staff, and its contributions in the field of housing and beyond are noteworthy. CINVA's imprint is therefore the consolidation of social structures characterized by the input of local communities, and international fellows and staff involved in teaching, training, and consultancy that characterized the projects as they developed, but that also left traces and tools in all involved. As Jorge Ramírez Nieto argues, CINVA cannot be understood nor studied under the lens of a particular graduate, nor by outstanding built forms as has been characteristically done with architecture schools and large-scale housing enterprises. From its inception CINVA was a collective endeavor where fellows, staff, and communities worked together. CINVA's political, social, and collaborative forms of practice, its value, impact, and lessons of its projects still need to be fully appreciated.

I would like to express my gratitude to Jorge Ramírez Nieto for his generosity in sharing his research and knowledge on CINVA, and Maria Catalina Venegas Raba who undertook all archival work needed for the writing of this paper.

1 In parallel, Europe's reconstruction after the Second World War and the beginning of the Cold War marked a crucial moment for the international transfer of building technologies, building construction techniques, and machinery through multilateral organizations.

2 Colombia's central geographical location (strategic to the OAS), the variety of climates within the country, and the existence of an already strong body of architects, engineers, and advanced construction methods were some of the reasons Colombia was chosen as the place to establish CINVA.

3 CINVA's academic structure was initially developed to have the same duration and administrative structure of the academic year of the National University. Because of the lack of postgraduate offer across Colombia, it is possible that many sociologists, social workers, and anthropologists signed up to CINVA in search of postgraduate experience.

4 For Colombian architectural historian Carlos Niño, the collaboration with the ICT was the decisive reason to choose Colombia as CINVA's headquarters. The ICT, created by President Eduardo Santos in 1939, was a well-known national housing institute with a strong program in social housing.

5 Leonard J. Currie (CINVA's former director), Guillermo de Roux (Panama), Celestino Sanudo (Chile) Herbert Ritter, and Eduardo Mejia (Colombia), with the engineering support from Carlos Valencia and Jorge Arias de Greiff, landscape design by Currie, and A. Manrique e Hijos, Manuel J. Uribe C (Colombia) as building contractors.

6 Some of CINVA's building reviews can be found in PROA No. 75 (Bogotá: August 1953), *The Architectural Record* (London: March 1957).

7 For CINVA scholar Jorge Ramírez Nieto the "problem of housing science" resided in how to construct with the community—a community that is neither urban or rural, and how to innovate technologically through the integration of the labor and expertise of new migrant communities and interprofessional support.

8 Brackets are my addition. In Colombia there had been early attempts to maintain tradition such as the pamphlet for self-build from 1938 illustrates.

9 Brazilian architectural historian, Nilce Aravecchia Botas has written extensively on this subject matter.

10 In Spanish IAP, *Investigación Acción Participativa*. In English Participative Action Research (PAR), an "approach in social sciences, a process which emphasises dialogue, self-reflection, and a participatory approach to knowledge which rejects the neat hierarchical distinction between the researcher and researched with the explicit purpose of empowering the oppressed and helping them to overcome their oppression."

11 Provenance and students during CINVA's operational years are Argentina 133 students, Bolivia 68, Brazil 69, Chile 58, Colombia 321, Costa Rica 22, Cuba 5, Ecuador 66, El Salvador 38, Guatemala 8, Haiti 22, Honduras 27, México 47, Nicaragua 13, Panamá 16, Paraguay 24, Perú 73, Puerto Rico 19, República Dominicana 31, Uruguay 23, Venezuela 33, others 7 and no data found 36. Analysis of this data was undertaken by Jorge Alberto Rivera Perez.

12 See the work of Maria del Pilar Sánchez Beltran for the case of Colombia.

13 From the 17 modules offered throughout the years, the long-standing teaching modules were: *Curso Regular de Adiestramiento en vivienda* (1952–65), *Curso Regional de Vivienda Rural* (1958–1967, 1969-1970), *Curso de adiestramiento en autoconstruccion* (1962–64, 1966–70). The development of new modules changed in response to new teaching staff, projects, and geographies. Fondo CINVA, database, *Universidad Nacional de Colombia*.

14 Teaching staff included professionals from United States of America, United Kingdom, Chile, Argentina, Peru, Colombia, France, Haiti, Israel, Ecuador, Cuba, Guatemala, Denmark, Holland, Italy, Venezuela, and Australia amongst others. In an interview with Jorge Ramirez, he highlights the absence of teaching staff coming from the USA. Some were present initially, but later years were defined mostly by Latin American professionals. Visitors also included Richard Neutra, Marcel Breuer, Rino Levi amongst others. Analysis of this data was undertaken by Jorge Alberto Rivera Pérez.

15 A publication that followed Caroline F. Ware's work at CINVA.

16 Some of Ware's indications materialized as projects put forward to Bogotá's City Council by the Colombian architect Jorge Gaitan Cortes, then part of the city's council. This was also extended to different countries across Latin America. It was also applied within "slum clearance programs" and to low income or social housing projects. Social work, participation and "slum clearance" was also addressed by CINVA but mostly across Latin America but goes beyond the depth of this chapter. It is important to mention that there are some problematic aspects to this as well—one of which understanding the population of inhabitants as usually "rebels, without ambition, unhygienic" in the words of Josephina R. Albano, and the social work and housing projects made available only to "rehabilitated" inhabitants.

17 As detailed by the 1957 Manual: 1. Get to know reality and implications (environment, population, culture, resources, economies, and housing), 2. Formation of interprofessional teams, 3. Development of the community, where housing occupies a predominant position in relation to the totality, 4. Education of peasants (men, women and children) as extension agents, and professional levels (agronomists, architects, social workers, and rural teachers) 5. Pilot project to provide regional adjustment to the problem and to the actions needed to be developed, 6. Collaboration with local entities that will assure the continuity of the program, 7. Construction of the experimental house to determine betterment possibilities in the use of local materials and technicians, investment costs, rural housing design, and the development of manual skills needed for construction of housing between the students from Buga's *Escuela Normal Agricola* and CINVA's trainees. The materials used for this construction where funded and purchased with the sales of the *Escuela Nacional* Agricola's crops.

18 The conformation and consolidation of community structures would later be promoted and included within governmental programs in Colombia as tools for integral development and social and material rehabilitation, and later recommended to the governments of the countries part of CINVA.

19 Parenthesis is my addition. Chambimbal follows and builds from previous CINVA rural projects in Colombia such as Roldanillo and Anolaima (1954), Sogamoso (1955), San Jeronimo (1956), and Buga (1957).

20 These were 1. School, 2. Housing improvements and maintenance, 3. Absence of recreational spaces, 4. Latrines, 5. A bridge over Chambimbal's river, 6. Illiterate population, 7. Lack of attention from the local authorities, 8. Presence of insects within the housing units, 9. Need of a chapel, 10. Need of a representative of the local authorities, 11. Lack of union and cooperation in the neighborhood, 12. Water hygiene problems.

21 These changes are also evident in the manual of investigation and extension in rural housing (*Manual de Investigación y Extensión en Vivienda Rural*) from 1958 where Albano, Fals Borda, and Vautier place emphasis on the role of the researcher as a sociologist and with scientific approaches— observation and data collection whilst recognizing interpersonal relationships, the need of time to establish trust, the need for clarity in communicating the aim and scope of the campaign, the importance of an attitude characterized by comprehension of the rural people rather than as "doctors" who "are afraid of getting their hands dirty," but should instead have material agency to demonstrate, by practical means, how materials can be used.

22 The work of scholars such as Jorge Vicente Ramírez Nieto at the Colombian National University who has led the project of the CINVA archive, of PhD and Master's students at the National University such as Jorge Alberto Rivera Paez and Martha Liliana Peña Rodríguez, and more recently the work and collaboration of the Institute of Urban Studies at the Colombian National University with scholars from Latin America such as Alejandro Bonilla Castro from Costa Rica, Nilce Aravecchia from Brazil, Florencia Agustina Brizuela from Argentina, and Ana Patricia Montoya Pino have been studying CINVA in recent years has been fundamental for the consolidation of an integral and in-depth understanding of CINVA.

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Forgetting Is Banned

Memory and the Possibilities of DesignBuild for Social Design Practice[1]

The list of critiques of imperialism in social design practice is long (e.g., Stairs, 2007; Nussbaum, 2010; Johnson, 2011; Redfield, 2012, 2016; Watson, 2012; Hancox, 2014; Linsell, 2014, 2015; Berlanda, 2015; Redfield & Robins, 2016; Schultz et al., 2018; Scott-Smith, 2019; Ambole, 2020; Keshavarz, 2020; Monk & Herscher, 2021; Tunstall 2023).

While I agree with those critiques, I argue that the most significant concern in the practice of social design is the designers' social class privilege. Issues of privilege bias affect not only the practice of foreign designers in so-called Third World environments, but also that of the local designers (Arboleda, 2022).

In this chapter, I explore the argument of privilege in social design with regard to aspects of memory. Memory and settlement are inextricably linked. This is particularly true in the case of Third World barrios or informal settlements. In these settlements, people's struggles, including their exposure to gun violence, are continuously invoked in day-to-day conversation. Memories of common suffering become essential in the creation and fostering of a sense of community among residents and, thus, essential to the existence of the settlements themselves.

On the other hand, the demolition of housing and other infrastructure to make space for artistic social design projects often causes not only the displacement of people but also the erasure of landmarks connected to significant memories. These acts of demolition may trigger a conflict between outside actors interested in solving problems of poverty through beauty (in the form of iconic architecture) and the willingness of local people to coexist within spaces that the outside actors might not consider beautiful, like those that remind people of horrific past events.

Figure 1: **The Biblioteca España in Medellin, Colombia.**

How can social designers carry out their work in informal settlements in a way that better represents the interests of residents? To address this question, I explore two contrasting approaches to memory commonly used in social design to deal with traumatic events caused by gun violence. They are a product-oriented "top-down" approach and a process-oriented "bottom-up" one.

The former is a paradigmatic approach that follows a high-design logic, in which architects with an artistic vision provide iconic buildings to communities in poverty. The latter is a DesignBuild approach that prioritizes the social benefits resulting from the process of working with people over the visual aspect of the built products. I study these approaches through one specific case, that of the barrio of Santo Domingo and the surrounding *Comuna 1* in Medellín, Colombia.

This chapter is intended to contribute to the scholarship on memory in social design. There exists a large body of literature on memory related to mainstream architectural design practice. In modern times, it dates back as far as John Ruskin (1857).

However, with regard to social design, the discussion of the role of memory requires further exploration. Thus far, the emphasis of social design literature has been on the *material* needs that the studied projects cater to, such as disaster reconstruction, schools, and health centers (e.g., AFH, 2006; Feireiss, 2009; Spataro, 2011; Gadanho, 2014; Golden, 2018). In contrast, projects featured in this literature only occasionally focus on memory (e.g., AFH, 2012; Klanten et al., 2012; Charlesworth & Fien, 2023). Moreover, in most of these cases, the focus remains on formal aspects, as it tends to be on memorials and other memory-related infrastructure as artistic pieces created by architectural designers in sites of poverty.

This chapter instead focuses on *social memory* (Beiner, 2007, pp. 26–28) and the role of *memory landmarks* for social design practice. By memory landmarks, I refer to preexisting spaces or simple objects created or appropriated by people without the intervention of designers and with the goal of memorializing an event that is significant to them. Such landmarks can include, for example, a small effigy, a utility pole, or a street corner. Thus, although the focus of this chapter is on the role of memory in social design, its goal is to highlight the importance of memory not in terms of (artistic) objects but in terms of living processes central to community formation and permanence.

1. Memory and settlement

When visitors to the world-famous *Biblioteca España* (Library of Spain) in Medellín, Colombia (Figure 1), exit the cable car station leading to it, they tend to miss a small and almost hidden effigy of Saint Mary that is located near the back of the station. This effigy is dwarfed almost to invisibility by the library's monumental structure. Moreover, from an aesthetic standpoint, it does not seem to fit. It is crumbling and dirty, and it has some traces of red paint that resemble tears of blood. It is an extremely sad image that stands in contrast to the unemotional, abstract geometry of the station (Figure 2).

This effigy bears witness to a struggle between residents and architects, as recalled by Adolfo Taborda, a community leader and descendant of one of the founders of the barrio where the library and the station were built. The barrio, Santo Domingo, is part of the northeastern Comuna 1, one of the most impoverished areas of Medellín. Taborda's family came from the countryside in the 1960s to escape poverty, settling in the comuna's then sparsely inhabited hill at the periphery of the city. It was not uncommon among these early residents to use, out of necessity, very basic materials for their houses, sometimes even discarded trash such as cardboard and plastic sheets. Through *convites*, a form of community work, the residents progressively built the barrio's basic infrastructure: streets, small plazas, water distribution networks, and so on.

Figure 2: Effigy of St. Mary and cable car station in Santo Domingo, an informal settlement in Medellin.

Taborda came of age during the toughest time in the history of Santo Domingo and Medellín's low-income comunas as a whole. Between the mid-1980s and early 2000s, these comunas became the site of a power and territorial control war involving drug lords, left-wing guerrillas, right-wing paramilitary militias, and police and military forces. This war was waged on the same streets that residents had built in convites, and it pitted their children against each other. It was part of a countrywide dirty war labeled by its main actors with the euphemism "the conflict." As a result of the conflict, even today in Medellín's comunas there are residents who still do not know where some of their relatives are. They were "disappeared"—another euphemism, this one for a gruesome practice of illegal detention, torture, death, and disposal of the body to eliminate the evidence.

Defying the risk of being targeted, Taborda became involved in social activism at a young age:

> **"I was trained lying on the floor, as the bullets whizzed by. [...] We lay in a house—the house is already demolished—and there we learned the art of community service."**
> *(Interview, August 9, 2018)*[2]

In 2005, in Taborda's most resounding act on behalf of housing rights in Santo Domingo, he chained himself to a utility pole and started a hunger strike to protest the demolition of housing for the construction of the Biblioteca España.

This pole no longer exists. Like the housing, it was removed for the construction of what was, by its own nature as an architectural art piece, a tabula rasa project.

Social urbanism

What was that tabula rasa project about? It was part of an ambitious initiative of using architectural design as a catalyst for social improvement. Medellín's city government (hereinafter "the city") has a design office that operates like a private architectural design practice. This office, part of EDU (Urban Development Company, by its Spanish initials), employs dozens of architects who design monumental architectural structures for other city offices.

Many cities employ architects, but what makes Medellín special is the goal of the EDU office. This goal partly relates to materializing *Social Urbanism*, a large-scale project for addressing poverty using architectural design as a central component.

The buildings produced for the Social Urbanism project are intentionally designed to be formally innovative and visually striking. This effort follows an essential principle propelling Social Urbanism: that the construction of beautiful buildings can

Figure 3: Some of the architectural projects produced by the Social Urbanism project in Medellín.

Figure 4: A cable car passing by the barrio of Santo Domingo.

spark social improvement. As Sergio Fajardo, the former mayor of Medellín who championed this project, explains, “We are going to break away from the idea that nice things are for the rich; instead, the most beautiful [things must be] for the most humble [people].” (Townsley, 2013, 6:02)

Since the early 2000s, the city of Medellín has carried out hundreds of infrastructural interventions following this architecture-centered approach. These interventions include several dozen iconic architectural structures, mostly in informal settlements (see EDU Design Workshop, 2015, 2022) (Figure 3). The Biblioteca España was one of the first pieces produced by Social Urbanism, and it remains the most iconic. Visitors can easily reach the Biblioteca via another Social Urbanism piece: the *Metrocable*. This is an innovative transportation initiative that uses a cable car system like those in the European Alps, only in this case the visitors’ destination is not a ski resort but a slum (Figure 4).

The Biblioteca España exemplifies the challenges of top-down, product-oriented social design practice as a whole. After winning several high-profile architectural awards and having some of its design documentation added to the collections of museums such as New York's MOMA, the building complex had to be demolished due to a multitude of design and construction-related problems (see Arboleda, 2022). As of the time of writing this chapter (2023), it is being rebuilt at an even higher cost than the original construction's US$6.8 million.

2. Why memory?

The pole to which Taborda chained himself to protest the construction of the Biblioteca España was only one of the memory landmarks removed by the city of Medellín for the materialization of its Social Urbanism infrastructure in Santo Domingo. The effigy of St. Mary described earlier was another. As Taborda recalls, this image ended up in its current location following one of the most contentious debates between barrio residents and officers from the city.

The effigy belonged to an elderly couple who had lost their son to the conflict. It was displayed outside their home in his memory, on the block where the station is now located. Like dozens of other families, they were displaced, and their home was demolished for the construction of this station.

The scale of the displacement of residents for the construction of iconic Social Urbanism infrastructure, including the Biblioteca España and the Metrocable station, has been massive. According to records from Santo Domingo's *Junta de Acción Comunal*,[3] about 600 residents were displaced for the construction of the Biblioteca alone. This systematic displacement of people has paradoxically betrayed the original Social Urbanism goals, since it has created more poverty among those displaced, while triggering a process of barrio gentrification (Arboleda, 2022, pp. 106–114).

Faced with their imminent displacement, the family and other neighbors pleaded to the city to at least let them keep the sacred image on the site. Unfortunately, their request was denied. According to Taborda (interview, August 11, 2022), the response received from a city officer was dismissive: *"What for?"*

As insensitive as the officer's question might sound, it is an important question to reflect upon for social design practice. What for? Why should memory be considered in social design practice, and how?

The effigy of St. Mary had become a de facto memorial for everyone in the barrio, because that street had been the site of some of the bloodiest confrontations during the conflict.

Taborda explains:

> **"This block, from here to there, brought us almost 250 deaths. We had an imaginary line, an invisible frontier of territorial gangs and popular militias. [...] I survived [attacks] many times. When I used to work in the night as a security guard, I would get off [the bus] here [where the cable car station is now]. Casually, one day, one of the *muchachos* [young armed militia men] appears and says, 'Everybody gets off [the bus].' They [the muchachos] were here, sitting, and they were masked. And he says, 'but not the one with the red jacket.' I was wearing a red jacket. So, the other [muchachos] went, 'Why not him?' [He retorted]: 'Because he won't.' So, they took all of the other [passengers] with them. A little later, I heard the gunshots ... ."**
> *(Interview, August 9, 2018)*

For some reason he could not fathom, Taborda had been spared death. Only years later did he learn that the masked *muchacho* commander who ordered him to stay on the bus was a former school classmate. He had recognized Taborda as he was about to order the killings.

Éver Veloza, also known as HH, was one of the bloodiest paramilitary commanders around the time of Taborda's story. In 2019, explaining the murder of people for apparent no reason, Veloza acknowledged:

> **"Ninety-nine percent of the people that we killed or disappeared, [and] even today their families haven't been able to recover their bodies, they were innocent persons. They were people who had nothing to do with the conflict, that did not belong to any armed group, but instead their crime was to live in zones of conflict, and that is why they died."**
> *(Angarita, 2019)*

As part of the design of the Metrocable station, the city of Medellín also planned to change the name of the street where the sacred effigy was originally placed and where so many of the killings had occurred. The street had been originally named Puerto Rico by residents.

Taborda explains why this discussion was also contentious:

> **"This street is named Puerto Rico. Why? Because right where the station is now, there was a bodega named Puerto Rico. When the Integral Urban Project came, the EDU wanted to change the street [name]; to call it *Calle La Ilusión [Hope Street]*. We said, "No, the street's name is Puerto Rico; it will always be named Puerto Rico, to honor that business that was there. And to honor the fact that the owners were assassinated."**
> *(Interview, August 9, 2018)*

What memory?

In Santo Domingo and other Medellín's low-income barrios, it is striking to hear how much people talk about death—the deaths of the past, the death that just happened, the anxiety of a loved one perhaps suddenly dying (Figure 5).

It is then paradoxical how literature published on Social Urbanism's high-design interventions generally avoids referring to the memory of death, despite its being so central to people's experience. That literature is instead hopeful, cheerful, and inspiring. A good example of this optimistic tone is *Arquitectura Pública* (EDU, 2015), an architectural book published by the city of Medellín to showcase its Social Urbanism projects. The book starts with an impressionistic description of a space that the city architects found in another Comuna 1 barrio:

> **"Among the narrow streets, the passageways, stairways and winding paths of Barrio Popular, on the northeastern slope of Medellín, there appeared what a group of inhabitants of the area had spoken about the day before, and which turned out to be like a magical realism story: a natural aquarium with enormous fish in a tank. [It was] right there, in the setting of a dense and disorderly populated area of the city, fed by the waters that come from the mountain. And, along that path [...] a whole party was held around the public washing of clothes, with music and even dancing, in an activity that, for the place, turns out to be unique to urban life, to what pertains to the community."**
> *(EDU, 2015, p. 9)*

Figure 5: A mural memorializing the deaths of young people in Santo Domingo, and the survivors' resilience. Speaking about the armed actors responsible for those deaths, the text reads: "They wanted to bury us, [but] they didn't know that we were seeds." The mural was painted by a youth residents' group, and it no longer exists.

The architects used this finding as "the seed" (10) or design concept for a project in the barrio. In the book, the architects invoke this example to explain their approach: going to the barrios, asking questions, and with the collected material creating designs from their own desks. Thus, despite all the rhetoric of community participation in this and many other publications by the city of Medellín, the architectural design process is largely a conventional one. After designing, the architects return to *"the* community*"* (as if it were a single, unified body) and show renderings that reflect the architects' own interpretation of the information they have gathered; the residents then suggest modifications.

Change "the community" to "the client," and this can be recognized as the typical architectural design process of visioning, brief, and iterating designs, only here it is adorned with the bells and whistles of community participation. In reality, here also the process and its outcome are always under the architects' control, and the client (as in "the community") does not participate in the design of the project itself, beyond simply making suggestions. Ultimately then, this is *partici-*

pation as information provision. Residents are considered mostly as providers of information, and they are left out of the design process as well as any other major decisions about the project.

One of the problems with this top-down, constrained form of participation pertains to the type of information that the architect is actually seeking. Architects might decide to discard information that, to their ears, is not pleasant to hear. In the Comuna 1 project described in the Arquitectura Pública book, the city architects had clearly decided to hear more about magical realism than about the brutal reality.

It was this top-down mentality that led to the controversy about the effigy of St. Mary. According to Adolfo Taborda, the city's main reason for refusing to keep this image on the site was that it was not part of the original design for the project. The city ultimately, and begrudgingly, agreed to keep the effigy, although not where it was originally. Instead, they removed it to that comparatively inconspicuous place where it does not block the view of the monumental structure. The situation with the street naming was similar. The city's reasoning in wanting to change the name to "Hope Street" was evident. Hope would be a more inspiring name, for the city's goal of promoting a sanitized story of social redemption, than that of the ill-fated bodega. Although the residents resisted this change, their own name for the street was not adopted by the city either—in official maps, the street appears simply as "31a Street."

Erasure

Several other memory landmarks in Santo Domingo were also erased for the construction of the Biblioteca, the Metrocable station, and other Social Urbanism infrastructure. Two of these, the local midwife's house and a traditional path that connected neighbors, were located right where the Biblioteca currently stands. A third landmark, the butcher's house, was located on a street that Taborda would like to see renamed *Calle del Marrano* (Pork Street) to honor the butcher, who was also displaced for another construction project.

Was the city of Medellín trying to intentionally erase, using architectural infrastructure, memories that included those of massacres, some of which had been committed with the complicity of the state itself?

The work of Liliana Sánchez is helpful in addressing this difficult question. Sánchez is a Medellín-based scholar who has carried out extensive community-based oral history work involving residents from Medellín's informal settlements, including Santo Domingo (e.g., Sánchez, 2017; Gutiérrez & Sánchez, 2017; MASO, 2018; Sánchez & Gutiérrez, 2020).

Figure 6: "Forgetting is banned," a graffiti piece near a high-rise housing structure (left). This structure was built by the city of Medellín to house the residents displaced for the construction of Social Urbanism infrastructure.

Sánchez has identified a coincidence between the location of former sites of killings and disappearances and the placement of cable car infrastructure, not only in Santo Domingo but also in adjacent barrios. However, Sánchez does not go so far as to definitively assert that this was intentional, partly because there is no "smoking gun." The city of Medellín has not made some records related to the Social Urbanism project available, so it is not possible to assert beyond any doubt that erasing the memory of those sites was an official intention of the project (interview, September 28, 2022).

However, on the basis of evidence from her participatory fieldwork with residents, Sánchez believes it could have been partly intentional and partly coincidental. The intentional part is easy to infer if one considers that one of the broad motivations of

Social Urbanism was to change a popular narrative of Medellín as the world's capital of crime. That narrative had some basis: Between 1990 and 2005, nearly 60,000 people were murdered in the city (Personería, 2005).

Still, the global association of Medellín with crime mortified the city's political, economic, and intellectual elites.

Alejandro Echeverri, the architect who conceptualized and led the planning of Social Urbanism, explains how this project was partly intended to shift that narrative:

> **"In the memory of the inhabitants of Medellín, this zone [Santo Domingo's Northeastern zone] represented the most painful [events] that have happened [in] this city in recent years, and also because of that it was so important to start making a transformation in this place."**
> *(Townsley, 2013, 5:40)*

The transformation, as described by the *New York Times*, was about turning "blight to beauty" (Romero, 2007).

The logic of such transformation is explained in a book published by the city:

> **"(W)e betted on changing the city's skin. [In places] where there was violence, fear, discord before, today we have the most beautiful buildings, of the best quality, for everyone to be able to come together around science, culture, and education."**
> *(Alcaldía, 2008, p. 149)*

Juan Luis Mejía, the president of EAFIT, a prestigious private university that hosts Echeverri's Social Urbanism research center, offers examples:

> **"(T)he Belén library that stands on the site occupied by the feared dungeons of the disappeared F2 [the now dismantled secret police, infamous for its torture practices]. The same happens with La Quintana and Santo Domingo, places associated with the worst memories of the collective nightmare that this society suffered."**
> *(Quoted in Alcaldía, 2008, p. 150)*

José Fernando Ángel, an architect who took part in the Social Urbanism project, summarizes this blight-to-beauty approach enthusiastically, albeit crudely:

> **"La Quintana, the creek where they threw the dead.**
> **That's where we put libraries."**
> *(Guerra, 2014, p. 59)*

Thus, according to these firsthand references, in that endeavor to reinvent and rebrand Medellín, the creation of architectural icons was essential, and those icons were partly created to erase the troublesome memory of crime.

However, that memory also belonged to the barrios' residents, given that most of those 60,000 were *sus muertos*, their dead ones. The Santo Domingo residents, as discussed earlier, did not intend to bury that memory, no matter how horrific it was nor how inconvenient it might have been for the city's dominant classes.

Conflict

In the end, the struggle over memory in Medellín was marked by diverging social class concerns. There was a conflict of narratives, in which the architects' hyper-optimistic narrative in service of the city's agenda of rewriting history risked erasing the historical memory of deadly events that were still important for residents to remember. Not only the placement of the effigy of St. Mary but also the murals and graffiti art in Comuna 1 bear witness to that conflict. One example is a graffiti art piece located near a high-rise structure built to house some of the residents displaced for the construction of Social Urbanism infrastructure. The graffiti says, in gigantic letters: *Prohibido olvidar*–"forgetting is banned" (Figure 6).

This phrase comes from a song by salsa singer and composer Rubén Blades (1991). The song, which protests against political repression in Latin America, has become an anthem for the Medellín comuna housing rights movement:

> **They banned going to school**
> **and going to the university.**
> **They banned constitutional guarantees and goals.**
> **They banned all sciences, except for the military one.**
> **By banning the right to protest, they banned asking questions.**
> **Today I suggest you, my brother,**
> **so this won't happen again:**
> **Forgetting is banned.**

As Blades's song cautions, in places of increasing restrictions, even constitutionally protected activities can be banned by laws of exception, such as those passed to justify the deadly 1980s—2000s military and paramilitary interventions that ultimately "pacified" the Medellín comunas. Echoing this song, the housing rights movement urges: The only thing that comuna residents should allow themselves to be banned from is to forget what they have had to endure.

But why should forgetting be banned? Why should residents not allow themselves to forget such horrific acts as killings and disappearances? Taborda explains: "If we forget, that means it never happened" (interview, August 11, 2022). In other words, people's landmarks of memory are necessary so the same atrocities do not happen again. The imperative to ban forgetting then arises from the hope that keeping reminders of horrors will prevent these from being repeated in the future.

Thus, keeping their memory landmarks was not only important but was in fact an existential need for the Santo Domingo residents. This explains their insistence on keeping their sacred effigy, street names, and other landmarks when the city intended to replace them with artistic infrastructure.

How memory should *not* be considered?

However, for the purposes of social design practice, the residents' plea on behalf of memory should not be understood as an invitation to make memory into an architectural formula—the easy formula of "let's ask people about their memories," or "let's design with memories in mind." For design work in sites of poverty, the issue is not as simple as making memory into just one more item for the design toolbox.

A key problem with this also top-down approach to memory is evident in a 2019 public art intervention in Santo Domingo.

The *Museo Urbano de Memorias* (Urban Museum of Memories) is a street art display consisting of dozens of murals, including murals featuring Santo Domingo residents and their memories. The project is run by an art collective called *Trash Art* (in English), led by artist David Ocampo. This is an independently-run initiative carried out in the vicinity of, and in conversation with, the Social Urbanism project (Figure 7).

Although this mural project is open to local artists, the majority are from outside the barrio, and some are even international artists. They go to Santo Domingo, ask people questions about their memories, and paint murals that depict those memories.

Figure 7: To the left, a mural from the Urban Museum of Memories in its urban context. To the right, another mural of this project.

Since some of the murals refer to the harshest moments in the history of Santo Domingo, Trash Art is presumably taking the appropriate approach to memory as discussed earlier. In the end, the logic invoked by these artists is the same as the residents': to memorialize the horrors of the past so they are not repeated.

However, a key issue with this project pertains to one of Trash Art's goals, namely developing "community-based tourism" (see Arredondo, Ruiz, & Urrego, 2019, p. 12). In fact, this mural art project is largely directed to tourists, to whom the art collective offers paid visits. A tour can be as expensive as US$25 per person, which is over three times Colombia's daily minimum wage, making it unaffordable for most people in the barrio. Directly addressing tourists, Trash Art promotes its tours using inspiring language: "[hear] stories full of hope," "pass by magic places," "feel the soul of the territory," and so on (Museo, 2021).

Adolfo Taborda explains one of the key problems with this type of *favela tourism* initiative: "It is not a matter of putting it [the story] out there [on a mural] so it doesn't repeat itself. The fact is that nobody should be making money from other people's pain." (Interview, August 11, 2022)

As Taborda further explains, this type of presumably socially-conscious muralism could be an exploitative practice, since it uses the barrio as a source of income for artist-entrepreneurs, while the bulk of the income does not stay in the barrio. He calls it an "extractivist" practice.

It is also worth noting that the mural artists might also reap the benefits of cultural capital formation. The fact that most of them sign their murals means that the work increases their exposure and helps them to grow their portfolios—with the added bonus that, as artists engaged in social art, they receive high praise for their do–good actions.

The Urban Museum's focus on individual authorship is evident in the method used by Trash Art to produce the murals. Answering a journalist's question as to how residents would take part in this project, Ocampo explained in 2019:

> **"The inhabitants of the territory join, first, by letting us [the artists] use their house façades to beautify the territory. Then, [they join the project] by taking care of the artists—giving them a little glass of water, or a little jar of juice. [The inhabitants should] be ready to cater to them [the artists], and to offer a better environment so that the artists feel comfortable. "**
> *(Ocampo, 2019, 0:50)*

Although well-meant, Trash Art's Urban Museum of Memories is ultimately a problematic project by a collective that otherwise does interesting participatory work, particularly with children. Instead, this is a *top-down* participatory project, insofar as it was not initiated by the residents as a whole and as their participation in the mural-making was mostly passive. At best, this project is yet one more instance of participation as information provision, since the residents were still expected to provide their memories for the artists to use at their leisure. Thus, in the act of solidarity of an artist painting barrio memories, there is also a risk of coopting memory through the artistic intervention. Such cooptation can involve both economic and cultural capital formation.

Bottom-up participation

The city of Medellín's *Social Urbanism* and the connected *Urban Museum of Memories* were projects proposed and/or materialized by practitioners in a position of comparative privilege. Although well-intended, projects like these might ultimately represent—and benefit—the practitioners' interests more than those of the residents.

As a whole, the case of barrio Santo Domingo offers an example of how, with their artistic interventions in sites of poverty, architects sometimes might end up unintentionally supporting privilege-biased agendas. This issue prompts a critical question: Can artist-architects afford to intervene on people's own terms, even if doing so comes at the cost of the architects sacrificing their own cultural capital formation? In other words, can architects work in informal settlements and other sites of poverty in a way that reflects the people's own interests over the architects' artistic agendas?

This is certainly possible, and examples can be found in some Social Urbanism interventions in Santo Domingo's Comuna 1. Along with the monumental artistic structures, the project also includes several simpler initiatives. These are small pieces of public infrastructure, such as the mini-park where the effigy of St. Mary is presently located.

These formally and programmatically more modest projects came about due to the residents themselves, who pressed for their construction. When the city was initially not willing to listen to them, the residents fought for their right to participate in the project to the point of establishing mechanisms of pressure as radical as the hunger strike and Taborda chaining himself to a utility pole.

In the published material about Social Urbanism, the city of Medellín often highlights these smaller projects as an example of the success of this project's participatory approach. However, this was *bottom-up participation*: These projects started with the residents, and the infrastructure responded to social needs they had identified.

That said, even in these smaller projects the city architects still took full control of the design process, and the projects' social outcome ended up being limited. For instance, when Liliana Sánchez visited the ponds and fish site that the city architects so enthusiastically celebrated in the Arquitectura Pública book, she learned that the architects' design intervention had ultimately destroyed the social dynamics generated by the public washing of clothes. "People don't wash [clothes] here anymore because all this was transformed," a resident told her (see Sánchez, 2017, p. 273).

3. Memory and the possibilities of DesignBuild

The Social Urbanism project could have had a much greater social impact had the city of Medellín, from the beginning of the project, embraced forms of participation that allowed for residents to have a larger decision-making role. Regarding how this could be done, the practice of DesignBuild offers the possibility for a

Figure 8: The work of the Global Seminar—Medellín Practicum in the Barrio of Carpinelo, 2022.

good model. In particular, I am referring to the type of DesignBuild practice that privileges the notion of *process* over that of product and that follows a bottom-up approach in which residents steer the process.

A number of DesignBuild projects that follow a bottom-up, process-oriented approach are currently being carried out in the Medellín comunas. One example is the *Global Seminar – Medellín Practicum*, a University of Colorado Boulder project presently focused on the barrio of Carpinelo, which borders Santo Domingo.

The Practicum is led by José "Jota" Samper, a faculty member at the University's Program in Environmental Design. Adolfo Taborda participates as a community partner and educator. One of his roles is to educate students on the rationale and techniques of community building. The constructions of this practicum are undertaken using the same traditional convite model that Taborda's parents used when building Santo Domingo nearly 60 years ago. The only difference is that, in this case, students are also part of the convite, building alongside the residents.

The Medellín Practicum's bottom-up approach responds to two key observations Samper made as he started to work in the Medellín comunas more than a decade

ago. First, the residents of the comunas possess a considerable body of knowledge on building, and this knowledge should be recognized and employed for the residents' own benefit. Second, when social initiatives catering to the comunas ignore such local knowledge and instead impose outside expert-based knowledge, the success of those initiatives might be limited.

The Practicum addresses these knowledge-related considerations by leaving the decision of what needs the project should tackle to community members themselves. The Practicum works in different phases, starting with an assessment of needs carried out by students through site visits, interviews, surveys, and other conventional information-gathering mechanisms. After collecting this information, students systematize it and present it to residents in an open meeting, the goal of which is for students to share what they have learned about infrastructural and other problems that the residents face. The next step in this process is one of validation and prioritization, in which residents respond to the presented information by expressing, in Samper's words, "Yes, these are our problems; or no, these are not. And the most important ones are these ones [...]" (Interview, November 22, 2022). Thus, in this case the framework of the intervention is defined on the people's own terms, rather than those of the designers in charge.

A key outcome of the residents' decision-making power in this DesignBuild project is that the infrastructure built to address the residents' relevant problems is usually very simple and practical. It is also very different from the artistic—and, for residents, often meaningless—gestures of Social Urbanism's high-design interventions.

Instead, the works resulting from the Medellín Practicum can be as simple as the public staircase built in the summer of 2022 (Figure 8). The goal of this intervention was to facilitate the movement of residents, especially during the rainy season when the walking paths become muddy and slippery.

Memory

Like Santo Domingo, the barrio of Carpinelo that hosts the Medellín Practicum offers a striking example of the connection between (traumatic) memory and settlement. This informal settlement emerged as a direct consequence of the Colombian conflict. As Marta Ardila, one of the barrio leaders, explains:

> **"Almost 100% of the inhabitants in these territories are victims of the armed conflict [and] of displacement. They have been displaced both from the countryside and also from [other parts of] the city itself. "**
> *(Ardila, 2022, 3:33)*

Thus, Carpinelo residents usually have difficult memories of the reasons they ended up in these territories and were forced to come together and establish the informal settlements. Very often, public statements by residents like Ardila include memories of violence, including the kidnapping, rape, and/or killing of relatives and the subsequent dispossession of their rural lands.

How can social designers deal with that connection between traumatic memory and settlement from a bottom-up, process-oriented standpoint? Rather than explicitly running a memory-related process, the Medellín Practicum leaves it up to residents whether and when to bring their memories into the conversation. In general, the Practicum lets residents take control of the narrative and tell the story on their own terms—organically, through conversations, as the building work is being carried out. In these open and free conversations, residents may include or exclude anything they choose. They may even generate new narratives from memories about the Practicum itself, such as memories of their interactions with former students. Thus, in this bottom-up, process-oriented project, the act of building ultimately also involves *building memory*. As Samper explains, it does not matter if the stairs that are built are *"chuecas"* (uneven). Instead, what is most significant in this case are the stories that emerge from that act of construction:

> **"When the community [members] tell [the story of the project], they for example stand on one of the staircase steps and tell you a 20-minute story about that step. So, then, it becomes a new narrative around something that is seemingly very modest from our perspective [as people of relative privilege], but that is valued by the community."**
> *(Interview, November 22, 2022)*

The Global Seminar—Medellín Practicum thus offers an example of how to address issues of memory, which, as explained earlier, are essential to consider in a social design intervention, as well as how to do this from a bottom-up perspective.

The Practicum does not aim to erase memory as Social Urbanism partly intended to do, but it does not seek to control memory either. Memory in this case is not used as a formula. Rather, it flows in the residents' spontaneous invocations of past events that emerge naturally and organically throughout the process of building. The Practicum, then, embraces the premise that people should have sovereign control over their memories and therefore they should be the ones to decide whether, when, and how to invoke and/or make use of those memories.

The material outcomes of implementing a bottom-up, process-based approach like that of the Global Seminar—Medellín Practicum might not be as visually spectacular as those of top-down, product-based initiatives like Social Urbanism. However, as Adolfo Taborda observes, they may be more meaningful to residents, since they materialize from the residents' own memories, needs, negotiations, and decisions.

Conclusion: a bottom-up approach to social design

In this chapter, I have studied two contrasting approaches to social design: a *top-down* high-design and a *bottom-up* DesignBuild oriented approach. It is important to acknowledge that, in the process of highlighting the possibilities offered by the latter, this comparison may come across as one-dimensional and simplistic, with one being presented as doomed to fail and the other as the panacea.

In reality, work in the field is so complex and it depends on such a vast array of specific circumstances that there is no shortage of DesignBuild projects that also fall into the issues discussed here with regard to high-design interventions. Therefore, more field-based research is needed in order to expand the body of critical literature on DesignBuild practice, with the ultimate goal to categorize both possibilities and limitations within this practice as well.

The research should consider a wide range of issues, from imperialism-related to practical. First, although the amount of existing literature is considerable, it is still worthwhile to continue expanding the research on imperialism by carrying out more field-based explorations on the geo-political implications posed by DesignBuild initiatives. These include issues of hegemony deriving from the contrast between a given studio's home location vis-à-vis the location of its interventions. Second, the research should also explore practical issues such as how a studio deals with the main constraint of DesignBuild practice. That is, its inevitably fragmented nature that often restricts international work to summer breaks, thus running the risk of espousing a build-and-leave mentality.

That aside, the case of barrio Santo Domingo and Comuna 1 studied here does offer the opportunity to appreciate how radical the contrast can be between a conventional top-down design and a bottom-up DesignBuild intervention, both in terms of processes and outcomes.

This contrast highlights the potential of DesignBuild to deal with a fundamental shortcoming of the conventional architectural design-centered approach to poverty alleviation: that of social class privilege.

Regardless of any potential limitations of the DesignBuild methodology, a bottom-up DesignBuild focus offers the possibility to overcome some of the key privilege-related issues currently affecting the practice of social design. This focus makes it possible to acknowledge and embrace the residents' own knowledge, follow the residents' own priorities, work with memory on the residents' own terms, and engage in construction projects that residents find useful and meaningful.

In general terms, the key possibility offered by a bottom-up approach to Design-Build boils down to *reconsidering the positionality of the architect*—that is, the relative position that an architect should assume in relation to the partnering community group. In this case, that position shifts from *driver* to *supporter* of the design process. That is, in this type of approach the architect assumes the role of a *facilitator* more than that of a conventional designer in full control of the process.

Therefore, embracing a bottom-up approach means rethinking the role of architectural design in a social design project. Jota Samper's motto of "*la comunidad es la que manda*" (the community is in command) exemplifies that rethinking in the case of the Global Seminar—Medellín Practicum. As seen with this example, a bottom-up, process-oriented approach can indeed be a viable alternative to the top-down, product-oriented perspective typical of projects like Social Urbanism, which emphasize spectacular designs. Instead, in a bottom-up intervention the outcome is primarily a social one, and as such it goes far beyond the built object.

Discussing the role of memory in social design allows for a deeper reflection on the complicated, and often overlooked, issue of privilege in this practice. Even in the instances in which we are cash-strapped, as social designers we are inevitably in a comparative position of privilege, because at the very least we have cultural capital. Thus, how can we as social designers carry out our work in a way that better represents the interests of residents? Using the case of memory, I have shown how this can be done by supporting *from below*, rather than controlling from above, community design initiatives, and using a process- rather than a product-oriented approach.

This shift entails, paraphrasing Rubén Blades, metaphorically "banning" ourselves as designers from having absolute control over the design process, thereby adopting the principle that *controlling is banned.*

1 I would like to thank an anonymous reviewer for their comments on a previous draft. This chapter is dedicated to the memory of my sister, Carolina, who unexpectedly passed away as I was conducting research for it. Carolina was an environmentalist and community advocate. She taught at the Técnico Industrial Multipropósito, a high school serving Siloé, one of the barrios in greatest poverty and with the highest crime rates in Cali, Colombia. Every time one of Carolina's students was killed as a result of the barrio's endemic violence, she would plant a tree honoring their memory in the school courtyard. Caro's own tree, planted by her students, is now part of her little forest.

2 In this chapter, I adopt an ethno-architectural approach by aiming to understand the problem from the perspective of residents themselves. To convey this perspective, I quote the words of Adolfo Taborda as exemplary of a predominant position in the neighborhood. This position has been documented in participatory action-research (PAR) work carried out by community-based organizations and involving hundreds of residents. My quotations from Adolfo Taborda come from extensive interviews conducted in 2018 and 2022. The interviews were carried out in Spanish and the translations are my own, as is the case with all the quotations in this chapter, except Guerra (2014) and Romero (2007).

3 Community action committee, the barrio's main community organization.

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8 Jota Samper

The Rural Studio:

Reconsidering Auburn University's Role in Constructing a Region

The Rural Studio is arguably the most well-known hands-on educational program in architecture in the United States. Within the field and beyond, the perceived impact and importance of the program rests on an implicit understanding of its "rural" character and on how the studio engages a specific people and landscape. Since its founding in 1993, undergraduate students from Auburn University's professional degree program in architecture have traveled 150 miles east of their campus in Auburn, Alabama to the tiny town of Newbern, with its population of 133 inhabitants (U.S. Census, 2020). Located in Hale County, Newbern sits within a formerly rich agricultural area called the Black Belt. Fanning out from their small, but growing Newbern campus, students have constructed over two hundred structures, including custom-built homes, institutional buildings, recreational spaces, and a series of regionally specific model housing units.

A truly "critical" regionalism

In the early 2000s, the Rural Studio and its charismatic leader Samuel "Sambo" Mockbee gained national and international attention in the architectural press and popular media. Accounts of the Rural Studio's work described it as a model of practice forged from the margins that could help heal the nation's social, racial, and spiritual divides. This essay considers the rhetorical and material strategies used by participants and commentators to position the studio thus. The program was among a number of North American DesignBuild education practices founded in the 1990s and early 2000s, standing out for its unique approach to what Tonya Stonorov calls "a remote and challenging setting" (Stonorov, 2018: 60).

Renewed interest in architectural regionalism and DesignBuild education in the U.S. arose around the same time. Both trends responded to the perceived failure of modernism on social and formal grounds. Architectural regionalism has been

defined in many in-depth texts, most of which share the goal of promoting architectural practice that provides, as Vincent B. Canizaro puts it, "a means by which tensions—such as those between globalization and localism, modernity and tradition—are resolved" (Canizaro, 2007: 22). Kenneth Frampton's work, for example, has argued that regional architecture based in "bounded domains and tactile presences can resist the dissolution of the late-modern world" (Frampton, 1987: 377). As it was articulated in the 1980s and 1990s, commentators associated "critical regionalism" with a specific genre of small-scale architecture that combined the material pallets of the regional environment and more modern forms.

In the U.S. context, descriptions of critical regionalism—whether the Bay Area style, timber structures of the Pacific Northwest, or Pueblo-style architecture of New Mexico—emphasize this architecture's supposedly isolated and peripheral status. For its proponents, regionalist architecture is an authentic reflection of regional culture born from climate and geography and protected from excessive cosmopolitan influence. Many designers wear the regionalist designation begrudgingly, feeling the term as an imposition of urban elites. As Keith Eggener writes, "Regional architecture is by definition peripheral architecture, and usually non-urban as well" (Eggener, 2017). He goes on to emphasize that reading canonical critical regionalist projects as unselfconsiously "folksy" belies their dependence on global finance or other aspects of the late capitalist economy (Eggener, 2002).

Scholars of regionalism point out that separating the autochthonous and global, intimate and far-reaching is not so simple. For example, when Barbara Ladd analyzes regional themes in Southern literature, she demonstrates that ideas of region are often shaped largely by nationalist ideology. This distorts "our sense of the past, our sense of place, our sense of what the present is all about, and the way we imagine the future" (Ladd, 2000: 32). Like discourse on critical regionalism, commentators often discuss DesignBuild implicitly or explicitly in terms of oppositions: process/formalism, community/intellectual, pro-bono/corporate. Considering region in DesignBuild breaks down these rigid designations, eschews romanticism, and seeks to deal instead with a far more complex and ethically ambiguous set of conditions.

In the early 2000s, the first national media accounts of the Rural Studio described it as peripheral to the institutional and urban centers of the profession. In these accounts, lack of resources, marginalized clients, and a generally anti-elite sensibility created a model that was both alternative to, and representative of, a contemporary American architectural and design culture. When British architect-academics Jeremy Till and Sarah Wigglesworth wrote of the program in a 2003 essay, they described it as the embodiment of a truly "critical" regionalism emerging from the "strong margins" of educational and professional culture.

Contrasting its social, political, and material approach to that of Frampton-style regionalist architecture, they argued that "[i]n its dialogue with the local, the architecture—as product and process—will be seen as a pioneering counterpoint to the homogenizing tendencies of globalization" (Till, Wigglesworth, 2003). By categorizing the Rural Studio as regionalist architecture, Till and Wigglesworth placed the program in dialogue with architecture of the world's postcolonies via a focus on finding local authenticity within a global marketplace and the implications of this act on architects' political impact. This essay considers this interpretation of the Rural Studio's work, examining how the studio's protagonists define regional practice and the related notion of place-based architecture relative to the political and economic systems with which the program grapples every day.

Mockbee's opportunistic approach to regional citizenship

To begin with, Sambo Mockbee pushed back on the idea that his and his students' architecture fit neatly under the rubric of regionalism. "I'm an opportunist," he said in 1997, "not a regionalist. I'm trying to apply my abilities to the opportunities I'm given" (*Architecture*, 1997: 49). In a 1994 interview in *Newsweek*, he wryly noted that in the South "we've been dealing with deconstruction since Reconstruction" (Wyman, 1994: 66). Well aware of the way his work and his rural clients might be viewed by the architectural mainstream, Mockbee referenced elitist academic discourse with a wink, upending the assumption that architecture created outside the world of urban centers has to be unsophisticated.

Prior to establishing the Rural Studio, Mockbee worked in both corporate offices and small design collaboratives and eventually started his own practice in the small town of Meridian, Mississippi. While he had worked locally, he had also designed and supervised large and technically sophisticated projects in Atlanta, at the University of Mississippi, and for national and international exhibitions (Goodman, 2014: 39–52). These experiences led to the formation of a specific understanding of architectural practice that included notions of citizenship. Speaking in 1996, he noted, "Even though my career had been developing successfully, I did not feel that I was maturing as a responsible architectural citizen." (Mockbee, 1996).

Mockbee's definition of citizenship was linked to a region (the Deep South), but he was equally interested in how architectural techniques—drawing, building, storytelling—could be applied in an opportunistic manner to any locale. That is, his techniques and outlook advocated for embedded practice, but were not wedded to one specific regional tradition.

As a leader and mentor in the Rural Studio's first ten years, Mockbee encouraged his students to take advantage of under-appreciated material and social possibilities.

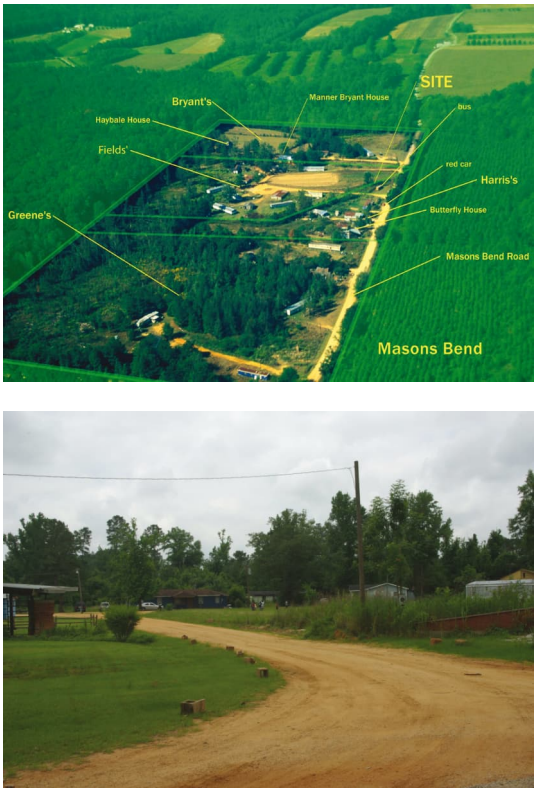

Figure 1: Overhead Map of Mason's Bend, Courtesy of Forrest Fulton Architecture, 2000, Mason's Bend.

Early Rural Studio students built custom homes in the Mason's Bend community, an isolated settlement where residents lived in housing that barely met their basic needs (Figure 1). In these projects, students incorporated regional symbols such as large front porches and dog trot layouts, which borrowed from regional architecture in an effort to create shade and channel breezes in the hot Alabama sun (Figure 2) (Wyman, 1994: 66). The grand rooflines, innovative construction systems, and customized layouts catered to clients' family structures and daily rituals.

In a talk delivered at SCI-Arc in 1996, Mockbee challenged his audience's understandings of scarcity and alterity, describing himself as a "scavenger architect" (Mockbee, 1996). At the time, he was being considered for the school's deanship, and the references were meant as a call to action—against formulaic thinking and towards social and formal improvisation—rather than as a description of inherent

Figure 2: Rural Studio, Harris/Butterfly House, built 1997; Rural Studio, Bryant/Haybale House, built 1994, Mason's Bend.

Figure 3: Scott Stafford (Rural Studio), Smoke House for Shepherd Bryant, incorporating salvaged road signs and glass bottles, built 1994 ; Forrest Fulton, Adam Gerndt, Dale Rush, Jon Shuman (Rural Studio), Detail of "Glass Chapel" made from donated car windshields, Mason's Bend, Alabama, built 2000.

qualities of specific people or places (Cox, 2013). Staying away from "high technology" solutions for budget and aesthetic reasons, early Rural Studio projects made use of hay bales, car tires, reclaimed wood, bottles, and other material found or donated locally (Figure 3). While some early commentators focused on the Rural Studio's strategies of reuse and generalized them as critiques of consumer

culture, universalism, and corporate banality, the effect was a bricolage that could be read equally as a nod to folk art or the deconstructivist style popular in elite design schools at this time (Vollaard, 2003). As a form of architectural regionalism, Mockbee's approach combined influences from historic and vernacular structures with novel interpretations of the symbolism and meaning of locals' lifestyles.

The "materials and systems" of DesignBuild education

Occasionally, critics have implied that in practicing in Hale County, Auburn's architecture faculty and students enter a "foreign" territory and impose aesthetic (implicitly white, elite) values that disregard locals' worldviews. More damningly, some see the studio enforcing a political and economic system that further elevates an urbane elite. For example, Patricio del Real wrote in 2009 that "veiled behind the contemporary language of social responsibility is a nineteenth century 'civilizing agenda'" and that "the worth of the Rural Studio experience is wholly dependent on values that can be exported and circulated" (Del Real, 2009: 125–26). This critique rests on the assumption that the people and institutions involved in the program have agendas that are fundamentally separate and antagonistic with those of the territory's residents.

To assess the truth of this characterization, one must understand how legacies of the settler colonial plantation system set up a series of regional and extra-regional relationships between higher educational institutions and the area's human and natural landscape. Before European conquest, the powerful Cherokee and Choctaw tribes and a coalition of groups organized under the Creek Confederacy controlled the central portion of present-day Alabama. Their reign ended with a decisive defeat in the brutal Creek War of 1813/14 (Keith, 2011). As spoils, the U.S. government offered land in central Alabama to European settlers from the Eastern seaboard. Rapidly moving west, these settlers remade the landscape in a quest for high-yield cotton crops and quick profits. Cotton plantation owners amassed hundreds of slaves and began building up the architectural and industrial landscape to reflect their cultural visions and extractive enterprises. Former Rural Studio instructor and frequent program advisor John Forney described modern Hale County, as a "post-catastrophe" landscape resulting from this 19th-century "cotton storm" (Forney, 2013). The ecological violence was matched by the human toll chattel slavery and its aftermath had on the region's Black population.

In the years following the Civil War (1861–65), when Americans of African descent were no longer legally enslaved, wealthy plantation owners rented small plots of land to Black farmers. These new citizens worked to gain the equal civil and legal rights guaranteed by the Reconstruction Act of 1867/68 (Norwood, 2023). In the next century, the cultural solidarity formed by the White population's fight to maintain land and wealth coalesced into a fierce sense of community linked to both place and racial animosity (Hubbs, 2003). In dialogue with this, those Black resi-

Figure 4: Gift Shop of the Rural Heritage Center, Thomaston, Alabama, built 2003.

dents who did not flee to greater opportunity in the North and West pursued cultural, economic, and religious fulfillment in a variety of determined and creative fashions. By the 1960s, Civil Rights organizations in the North collaborated with local activists to bring light to the widespread racial violence and voter suppression still very active in the Black Belt (Jeffries, 2009). Through these efforts, activists made some progress on issues of basic representation in legal and elective politics. Nonetheless, legacies of race and class conflict continue to play out in land ownership patterns, job opportunities, and de facto segregated education.

At times, the Rural Studio has engaged directly with the resultant regional cultures by offering architecture to support reparative practices. For example, the studio helped procure $190,000 from a rural development block grant from the U.S. bureau of Housing and Urban Development (HUD) for the renovation of the Rural Heritage Center in Thomaston, AL. The organization supports local culinary and artistic culture, making the talents of central Alabama's rural residents visible and purchasable to outsiders (Figure 4). In another case, the studio's second director, Andrew Freear, supervised a team of fifth-year students in 2009 to construct an addition to Greensboro's Safe House Museum (Figure 5). This institution began as a grassroots effort to

document and memorialize the racial terrorism of the Ku Klux Klan and the heroic efforts of local activists in fighting their violent oppression. In both cases, students supplemented existing structures with sleek additions in glass and steel, a departure from the exuberant "make do" aesthetics of earlier Rural Studio designs.

In addition, the program's pedagogy encourages students to grapple with the legacies of the area's history. This occurs primarily through a fieldwork-based seminar begun informally by Mockbee and D.K Ruth and later taken over by Mockbee's friend and fellow Auburn architecture graduate, the preservationist Dick Hudgens. Hudgens leads third-year students throughout the area, asking them to consider pre-Civil War homes and their accompanying service buildings and slave quarters. Describing buildings through what he calls "materials and systems," Hudgens explains where building components came from, how they were transported, manipulated, and assembled (Hudgens, 2013; Vendrell, 2023). "Systems" indicate the entire lifespan in which his-

Figure 5: Safe House Museum exterior and interior, built 2009.

toric buildings participated, including equally louvers, venting, and clothing styles to cool spaces on humid afternoons, the input of mail ordered pattern books and the skill of slave carpenters. To dismantle the assumption that historic architecture can only teach lessons in formal imitation, students are taught to see the relations between material objects, economy, labor, and everyday life. In so doing, program leaders describe a regional architecture that resides in a network of relational nodes, forces, and effects unfolding in the interplay of social, economic, and environmental forces.

The university extension as regional actor

While both Mockbee and Freear (whose approach to region will be discussed later in greater depth) grapple in different ways with the racial and economic legacies of an extractive plantation system, one figure remains strikingly outside their focus and commentary: the university extension itself. Universities, of course, have been and continue to be a powerful force shaping the character of central Alabama. Since its founding in 1872 as the Alabama Polytechnic Institute (API), the Rural Studio's parent institution (renamed Auburn University in 1960) has been entwined with the politics of race, land, and labor in the region.

Like other 19th-century universities, the school served as a vehicle for the democratization of education and research while also profiting from and enforcing white supremacy. APl's original funding came via the 1862 Morrill Land-Grant College Act, which injected capital into universities that promoted education in "agriculture and the mechanical arts," including extension programs engaging students in real-world applications of agricultural, forestry, and animal science (Stein, 2020). This funding was generated from the sale of federal lands acquired in the first half of the 19th-century through the dispossession of Indigenous nations (Stein, 2020). As a "land grant" university, API was dependent on substantial federal funding, while simultaneously remaining staunchly opposed to federal oversight. For example, in 1948, William Bell—a Black army master sergeant and World War II veteran—attempted to enroll in API's architecture school. The administration refused, arguing that such a move would threaten the "southern way of life" so valuable to the school and its powerful alumni (Olliff, 2001).

Founded in 1907, API's architecture school featured a Beaux-Arts curriculum paired with some interest among faculty members in the preservation of historic, southern regional architecture. By the time Mockbee arrived as a student at Auburn in the 1970s, the curriculum featured remnants of a Bauhaus-influenced pedagogy and the beginning of post-modern influences (Fazio, N.D.). Predominantly serving students from Alabama and the surrounding region, the next decade saw the school cultivate study abroad in Italy and practice-based studios in Birmingham, Alabama (Faust, 2013). Within the state, its major role was producing young architects capable of entering professional practice, or more rarely, leaving the region in favor of prestigious graduate schools in the Northeast.

Rural places and the economics of institutional freedom

By the early 1990s, a worldwide recession made jobs for young architects scarce (Gingles, 1991). With a collapse in commissions, Mockbee's growing architectural practice came to a halt. Knowing he was looking for direction, department head D.K. Ruth offered Mockbee a full-time position teaching design at Auburn in 1991. While Mockbee had taught workshops and participated in reviews in the past, accepting the position represented a moment of personal and professional crisis. It forced him to live far from his family in Canton, Mississippi, and to defer his dream of becoming a renowned designer (Archer, 2013).

As a response to the need for practical training in a recession, the faculty of Auburn's School of Architecture approved a plan for an urban outreach center to be located in Birmingham, Alabama. The Urban Studio, as it was called, followed the basic model of a community design center, offering pro-bono services to urban organizations while giving students marketable skills (Smith, 2013). In contrast, D.K. Ruth was interested in a studio focused on preservation that engaged students more viscerally with the historic architecture of the state. Thinking at first that they might find an antebellum house to restore, Ruth and Mockbee gained the support of Auburn's Vice President for University Outreach and Associate Provost, Dr. David Wilson, who himself was raised in a poor sharecropping family outside McKinley, Alabama. Without formal departmental approval, Mockbee gathered a small group of students and headed to Hale County (Smith, 2013). While the department was seeking its salvation in urban cosmopolitanism, the Rural Studio would, ironically, produce a far wider visibility for the school both nationally and internationally.

In the Rural Studio's first ten years, Auburn provided very little funding or administrative assistance beyond Mockbee's salary (Bennett, 2012). At this time, U.S. higher education experienced a steady decline in state support, forcing many universities to find alternative income sources (Rustin, 2016). From the start, Mockbee and Ruth pursued independent funding, winning a $215,000 grant from the Alabama Power Foundation. As the philanthropic wing of the Alabama Power Company, the foundation was deeply tied to regional rural development. In the 1920s and 1930s, the company had purchased large tracks of land throughout the state, constructing dams, bringing electricity to underdeveloped areas and, not inconsequently, funding research on hydrology at API. With the goal of bringing industry and business to the state, the company reshaped the physical and political landscape in its image (Haeuser, 2018: 57). Once an agricultural powerhouse, the 20th century saw central Alabama become the site of an unevenly distributed modernity.

Figure 6: Ben Cannard, Phillip Crosscup, Kerry Larkin, Marie Richard, James Michael Tate, Keith Zawistowski, Floris Keverling Buisman (Rural Studio), detail from Lucy Carpet House, sponsored by Interface Americas Inc., built 2002.

Though Mockbee is often characterized as a genius of place, he was equally adept at navigating the expectations of a variety of funding audiences. In these early days Mockbee and Ruth also secured $75,000 from the Jessie Ball duPont Fund. Based in Jacksonville, Florida, the fund is built from the trust of its namesake. An indust-rial and finance heiress and educator, duPont was known for her support

of accessible (though racially segregated) education and the preservation of pre-Civil War architecture in the South (Hewlett, 1992). Today, the trust's agendas include extending education to the historically excluded and supporting "[p]lacemaking to build stronger communities where all voices are heard and valued" (DuPont, 2023). For funders, place-based work was safe, generative, and transcended political controversy. The studio's approach of voluntary work mirrored calls by politicians in the 1990s to address social policy with programs that fostered "independence" and entrepreneurialism.

Around the same time, Mockbee applied for, and was awarded, a grant from the Graham Foundation for Advanced Studies in the Fine Arts, for a film (never completed) entitled, *The Nurturing of Culture in the Rural South: An Architectonic Documentary.* Describing the project's goals, Mockbee noted, "I am interested in what might prompt and ma,ke possible a process of entering a taboo landscape, in my case, the economic poverty of the Deep South" (Mockbee, 1998). The implication was that art and architecture, rather than direct political advocacy, for example, could help navigate a region's economic and political fractures.

Throughout the 1990s, the program gained momentum and positive publicity. In 2001, a team of fifth-year students accompanied Mockbee to New York when the program was featured on the Oprah Winfrey show where they accepted the Angel Networks $100,000 "Use your Life Award." Jeff Bezos of Amazon was the sponsor (Oprah, 2001). Corporate philanthropy influenced early Rural Studio work even at the material scale. For example, in 2000 the Rural Studio displayed its work at the interior design trade fair NEOCON. There, Interface Americas Inc.—an Atlanta-based sustainable flooring manufacturer—agreed to support a house in Mason's Bend under the condition that they use their patented carpet tiles in its construction (The Rural Studio, N.D.) (Figure 6). Funding of this nature was a prerequisite for Mockbee and his students to escape the confines of both private practice and typical architectural education, and its necessity ensured that the studio's work remained dependent on extra-local inputs and extra-state actors.

Civic institutions and housing models

In 2003, soon after Mockbee's passing, the Rural Studio obtained permanent funding through Auburn University's Peak of Excellence program (The Rural Studio, 2003). By making the program a firm fixture of the third and fifth-year programs, Auburn has provided financial, administrative, and legal support. With this, Auburn has requested regularization of the program and oversite on financial and legal questions. After a few years of transition, Andrew Freear, a British architect who had worked in Atlanta and then in Auburn, took over leadership of the program. In contrast to Mockbee's personal approach, which projected a playful confidence to

locals and the architectural media, Freear demonstrates a more measured stance. Under his direction, the studio's main goal shifted from increasing the visibility and dignity of the rural poor to giving local institutions a permanence and gravity that support the distribution of social services.

Formally, the faculty went from encouraging student projects that cleverly combined vernacular references, found objects, and post-modern sensibilities to those that express progress and context through impressive spans, clean finishes, and framed views. For example, the Hale County Animal Shelter (2006) and Akron's Boys and Girls Club II (2007) each use a lamella structure to turn off-the-shelf dimensional lumber into a dramatic all-season covered space (Figure 7). The Newbern Town Hall (Figure 8) uses 8" heavy timber cypress "to give both

Figure 7: Whitney Hall, John Marusich, Adam Pearce, Danny Wicke (Project Team), Boys and Girls Club 2, Akron, Alabama, built 2007.

Figure 8: Brett Bowers, David Frazier, Mallory Garrett, Zane Morgan (Project Team), Newbern Town Hall, Newbern, Alabama, built 2011.

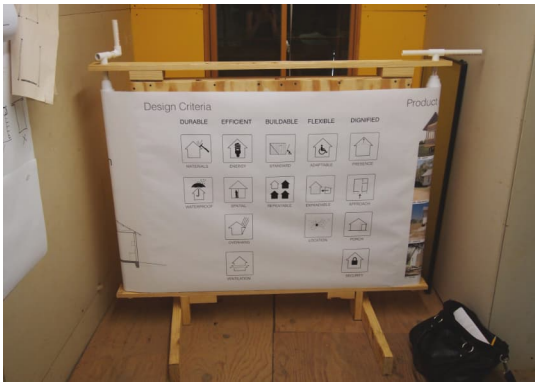

Figure 9: 20K House review at Red Barn, fall 2013; Presentation boards showing priorities of 20K houses prepared by students to show public/clients/donors.

physical and psychological weight to the civic building" (The Auburn University Rural Studio, 2015). Student teams source discounted or donated materials from local suppliers, including wood from Alabama mills, and fundraise to hire area sub-contractors who can pour concrete, install plumbing, and perform other jobs beyond their capabilities. Students must still be resourceful, but the products emerge from working with formal organizations and government entities rather than negotiating interpersonal taboos. Along the way, the program's focus shifted towards more standard rubrics of design practice: rigor, client communication, efficient management of budget, functionality, and durability (Figure 9).

From Rural Studio leaders' perspective, these new structures conform more closely to the aspirations of locals. As Freear put it, "I think they didn't like a lot of the things we did in the early days, from a stylistic point of view, and I think they do now" (Freear, 2013). The argument here is that clients, when listened to, often simply want standard, good practice where regional identity in a rural context or what Mockbee deemed "architecture for the soul" play a secondary role.

But even standard good practice contains ethical ambiguities relative to regional economic development. Though some might see it as a space "left behind" by modernization, the region has served a purpose relative to economic development elsewhere. Between 1990 and the present, forestry companies converted a million acres of Alabama farmland to timber. The timber economy reinforces poverty in the area because it requires few local workers, and owners are typically large companies located out of state (Kennealy, 2005: 7). Thus, even the act of sourcing "local" lumber puts the studio in uneasy dialogue with one of the primary actors ensuring the continued impoverishment of the area.

Figure 10: Timothy Owen, Loren Prosch, Claudia Vollero (Rural Studio), Eddie's Home in Foreground, 20K House.

Working on housing in Hale also links the Rural Studio to political and economic systems reaching well beyond the Black Belt. Since 2005, teams of students have constructed, and then gifted, one small, model home per year (Figure 10). The effort was begun by a group of Outreach students, who visit from outside Auburn for one year, based on a subsidized loan program for which one client qualified. More recently, the effort occupies each new cohort of the program's third-year students. Administratively this works well because students inherit many of the parameters of an existing prototype and the houses can be built in a matter of weeks. Each house grows from the lessons of past models while adapting plans to some specific client needs, such as family size or handicap accessibility. As one student observed, "originally students were going and making friends with 'Music Man' [a particularly memorable early Rural Studio client] and making him a custom house exactly fitting his needs, whereas now the 20K houses are intended for anyone" (Durham, 2003).

To-date, these houses have been financed through small grants, fundraising, donations from Habitat-for-Humanity-style volunteer builders, or directly from the studio's operational budget. The issue of affordable and healthy housing in Hale County—as Rural Studio leaders themselves would be first to acknowledge—goes far beyond what a group of architecture students and faculty can supply. The few federal programs that could provide loans or subsidies for rural homes disqualify almost all needy applicants based on lack of clear land tenure, poor credit rating, or underdeveloped infrastructure (Kennealy, 2005: 3; Dorr, 2013). Around 2014, Rural Studio leaders began consulting regional banks and non-profit developers. Their goal was to train and hire locals to build standardized home designs in order to create job opportunities and achieve efficiencies beyond what was possible with amateur student builders. Frustratingly, issues with land tenancy and a mismatch between available funds and actual construction costs have prevented this concept from proceeding in Hale.

In 2019, studio leaders re-named the effort the "Front Porch Initiative product line" (Rural Studio, 2023). Under the direction of Auburn faculty member Rusty Smith, Auburn has licensed plans for the design to non-profit developers located in Oklahoma, Georgia, and Florida. While these homes may be built in areas that share regional connections, including some climactic and cultural characteristics, this represents a step away from what Freear calls "backyard architecture," where accountability is linked to working in place (Freear, 2017). In Hale, the Rural Studio's housing work remains tethered to the program's fundraising and educational capacities. The governmental and economic systems that support educational extension and corporate extraction allow development in the Black Belt, but only on limited terms.

Region beyond place: economic and political entanglements

Since the Rural Studio's founding, federal and state policy towards social services and housing provision in the U.S. has increasingly relied on market-based approaches, non-profits, and volunteer work (Kennealy, 3). The architecture media's characterization of the early Rural Studio usually focuses on the program's affective aspects, especially those linked to the feeling of place. These accounts effectively obscure the university and program's economic entanglements with 100 that omit the financial and political logics at work, a full understanding of DesignBuild in the U.S. must also consider architectural and educational organization's complicities in these systems.

Drawing attention to these omissions does not undermine the good work of the Rural Studio's protagonists. Over thirty years, faculty and students have helped many in Hale County to live better, richer lives with dignified housing and supportive civic infrastructures. The leaders of the program, and others like it, combat chronic

overwork and underfunding and take responsibility at great personal sacrifice for shepherding projects to completion. These leaders' on-the-ground understanding of students' limited efficacy on systemic issues often gets lost in discourse produced in architectural media and lecture halls. This is not helped by the fact that program funding depends on depictions of community-based DesignBuild education as a virtuous, politically neutral, extra-state arm of the university and the profession-at-large.

By focusing on a commitment to place, current Rural Studio leadership attempts to side-step either grandiose ethical claims or harsh critiques. In a 2017 essay, Freear notes that "in the increasingly globalized world we live in today, where the creative nuclei of cultures are homogenizing at a sub-mediocre level and people are increasingly blinded by technology, place-based design is more important than ever" (Freear, 2017: 19). Freear's characterization of place-based practice echoes those expounded by critical regionalists advocates in the 1990s. A deeper look at the Rural Studio's trajectory highlights that this carefully cultivated relationship to place is at least partially the result of the uneasy relationship with philanthropic organizations, the neoliberal university, and a policy environment characterized by strategic governmental neglect. From the onset, the Rural Studio's ameliorative role within the narrative of the U.S. architectural profession has privileged readings of region that focus on authenticity and place. But like all community-based DesignBuild in the US, the program is enabled by, and enabling of, a wider economic and political program.

As political discourse in the United States has become more polarized, pundits promote some regions—especially the Deep South—as strongholds of "authentic" American culture, implicitly linking them to white ethno-nationalism. State universities are on the front lines of discussion of what can and cannot be said about systemic inequality, race, and privilege (Mounk, 2023). Continuing to see the Rural Studio and its DesignBuild brethren only as folksy practices performed at the "margins" belies a landscape rife with moral ambiguity. By rejecting both hagiography and simplified critiques we can understand these programs' complicities and craft a path forward that is as nuanced and strategic as this challenging moment requires.

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In this book, nine authors explore the DesignBuild learning method within the postcolonial context. Using concrete examples, the hands-on approach is critically examined and evaluated. One focus is on the overseas engagements of European and US students, who actively apply their newly acquired knowledge in cultures foreign to them. The authors also document and analyze projects by students from Latin America, Asia and Africa, who use the method, among other approaches, as a field of experimentation to question colonial norms. In addition to the students' viewpoints, the contributions also address those of the community, educators, and supporters, thereby specifying the problems and challenges faced by all those involved.

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